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INTRODUCTION TO THE SCIENCE OF LANGUAGE.

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IN TWO VOLUMES.

VOL. II.

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LONDON:

C. KEGAN PAUL & CO., 1, PATERNOSTER SQUARE.

1880.

"Ille demum foret nobilissima grammaticæ species, si quis in linguis tam eruditis quam vulgaribus eximie doctus, de variis linguarum proprietatibus tractaret; in quibus quæque excellat, in quibus deficiat ostendens."—BACON ("De Aug. Scient.," vi. 1).

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CHAPTER VI.

ROOTS.

"Innumeræ linguæ dissimillimæ inter se, ita ut nullis machinis ad communem originem retrahi possunt."—F. SCHLEGEL.

"Die Etymologie hat den vollen Reiz aller der Wissenschaften, welche sich mit den Anfängen und dem Werden grosser Erzeugnisse der Natur oder des Geistes beschäftigen."—G. CURTIUS.

IN the Welsh book of Taliessin, a manuscript of the fourteenth century, the bard declares that "there are seven score Ogyrven in song,"[1] and Prof. Rhŷs points out[2] that these are the same as the "seven score and seven Ogyrven," or roots, which, according to another Welsh writer, who lived a century or two later, "are no other than the symbols of the seven score and seven parent-words, whence every other word." But the doctrine that all our words are descended from a limited number of primæval germs or roots is far older than the Welsh bards. More than two thousand years ago the grammarians of India had discovered that the manifold words of their language could all be traced back to certain common phonetic forms which they termed "elements." Already the Prâti'sâkhya of Kâtyâyana speaks of the verb "by which we mark being" as a *dhâtu* or

[1] Skene: "The Four Ancient Books of Wales" (1868), i. p. 527, ii. p. 132.

[2] "Lectures on Welsh Philology" (1877), p. 320.

root, and before the Nirukta of Yâska was composed, a fierce controversy had begun as to whether these roots were all necessarily verbs. Yâska sums up the controversy, and after stating fairly the arguments on both sides, decides in favour of the Nairuktas or "etymologists," the followers of the philosopher 'Sâkaṭâyana, who held that every noun was derived from a verb. Vain were the pleadings of Gârgya and the Vaiyâkaraṇas or "analyzers" on the other side. They urged that if all nouns came from verbs, a knowledge of the verb would of itself make the noun intelligible, that whoever performed the same action would be called by the same name (all flying things, for instance, being called *feathers*, from *pat*, "to fly"), and that everything would receive as many names as there are qualities belonging to it, while the derivations proposed for many words were forced and unnatural, and as things come before being *per se*, that which comes first could not be named from that which comes afterwards. But the Nairuktas had their answers ready. All words, they said, really were significant and intelligible, while custom rules that agents and objects should get their names from some single action or quality, the "soldier" from the pay he receives, the "stable" from its standing up. If an etymology were forced, so much the worse for the etymologist, not for the method he pursued; and as for the last objection, no one can deny that some words are derived from qualities, even though qualities may be later than the subjects to which they belong.[1]

[1] Max Müller: "History of Ancient Sanskrit Literature," 2nd edition (1860), pp. 164-68.

The question over which the Hindu grammarians contended has been revived in our own day. Comparative philology was the result of the study of Sanskrit, and the Sanskrit vocabulary had been ranged under a certain number of verbal roots. Both the term and the conception, indeed, had already been made familiar to the scholars of the West by their Arab and Hebrew teachers, the only difference between the Sanskrit and the Semitic root being that the one was a monosyllable, the other a triliteral. European philology began to recognize at last that words have a history; that we cannot compare Latin and Greek and English words together before we have discovered their oldest forms, and that the common phonetic type under which a cognate group of words is classed must be no mere arbitrary invention of the lexicographer, but be based on reality and fact. Roots are the barrier that divides language from the inarticulate cries of the brute beast; they are the last result of linguistic analysis, the elements out of which the material of speech is formed, like the elementary substances of the chemist. But we must be careful not to fall into the mistake of the Indian grammarians and their modern followers, and confound these roots with verbs or any other of the constituents of living speech. The roots of language are like the roots of the tree with its stem and branches; the one implies the other, but all alike spring from the seed, which in language is the undeveloped sentence of primitive man, the aboriginal monad of speech. Roots, as Professor Max Müller has fitly called them, "are phonetic types, the moulds into which we pour a group of words allied in sound and

meaning. Thus in the Semitic tongues, a root is the union of three consonants, out of which numberless words are created by the help of varying vowels and suffixes. *Kâtal*, for instance, is "he killed," *kotêl*, "killing," *k'tol*, "to kill" and "kill," *kâtûl*, "killed," *katl*, *kitl* or *kutl*, "a killing," where the difference of signification is marked by a difference of vowel; and the whole series of co-existing forms presupposes a triliteral root or phonetic type *k-t-l*, to which was attached the general sense of "killing." Such a root could not, of course, have found any actual expression in speech; it was an unexpressed, unconsciously-felt type which floated before the mind of the speaker and determined him in the choice of the words he formed. When Van Helmont invented the word *gas*, he did but embody in a new shape the root which we have in our *ghost* and *yeast*. The primordial types which presented themselves almost unconsciously before the framers of language, which lay implicit in the words they created, must be discovered and made explicit by the comparative philologist. Just as the phonologist breaks up words into their component sounds, so must the philologist break up the groups of allied words into their roots, for roots are to groups of words what the letters and syllables are to each word by itself.

The influence of the Hindu tradition has introduced into European philology expressions like "a language of roots," "the root-period of language," and the like, and has made some writers even speak as though our remote ancestors conversed together in monosyllables which had such general and vague meanings as "shining," "going," or "seeing." Prof. Whitney, the leading representative

of the "common-sense" school of philology, has not shrunk from stating clearly and distinctly the logical consequences of such language. He tells us that "Indo-European language, with all its fulness and inflective suppleness, is descended from an original monosyllabic tongue; our ancestors talked with one another in single syllables, indicative of the ideas of prime importance, but wanting all designation of their relations."[1] Such a language, however, is a sheer impossibility—even for a body of philosophers or comparative philologists, and it is contradicted by all that we know of savage and barbarous dialects. In these, while the individual objects of sense have a superabundance of names, general terms are correspondingly rare. The Mohicans have words for cutting various objects, but none to convey cutting simply; and the Society Islanders can talk of a dog's tail, a sheep's tail, or a man's tail, but not of tail itself. "The dialect of the Zulus is rich in nouns denoting different objects of the same genus, according to some variety of colour, redundancy, or deficiency of members, or some other peculiarity," such as "red cow," "white cow," "brown cow;"[2] and the Sechuâna has no less than ten words to denote horned cattle.[3] The Cheroki possesses thirteen different verbs to denote particular kinds of washing, but none to denote "washing" itself;[4] and, according to Milligan,[5] the aborigines of Tasmania

[1] "Language and the Study of Language," p. 256.

[2] "Journal of the American Oriental Society," i. No. 4, p. 402.

[3] Casalis: "Grammar," p. 7.

[4] Pickering: "Indian Languages," p. 26.

[5] "Vocabulary of the Dialects of some of the Aboriginal Tribes of Tasmania," p. 34.

had "no words representing abstract ideas; for each variety of gum-tree and wattle-tree, &c. &c., they had a name, but they had no equivalent for the expression 'a tree;' neither could they express abstract qualities, such as hard, soft, warm, cold, long, short, round." The lower races of men have excellent memories, but very poor reasoning powers; and the European child who acquires a vocabulary of three or four hundred words in a single year, but attaches all its words to individual objects of sense, reflects their condition very exactly. We may be sure that it was not "the ideas of prime importance" which primitive man struggled to represent, but those individual objects of which his senses were cognizant. As M. Bréal observes,[1] "It is not probable that in the ante-grammatical period there were as yet no words to denote the *sun*, the *thunder*, or the *flame*. But the day when these words came into contact with pronominal elements, and so became verbs, their sense also became more fluid, and they dissolved into roots which signified *shining*, *thundering*, or *burning*. We can understand how the old words which designated the (individual) objects, afterwards disappeared to make room for words derived by the help of suffixes from these newly-created roots. We can better understand, too, the existence of numerous synonyms which signify *going*, *shining*, *resounding*; they are the abstracts or *abstracta* of former appellatives. The idea of *shining*, for instance, could be taken from the fire as well as from the sun, and so a considerable number of roots, from

[1] See his excellent article: "La Langue indo-européenne," in the "Journal des Savants," Oct. 1876 (p. 17).

very different starting-points, have come to be united in a common term." An elementary work on French etymology groups words like *rouler, roulement, roulage, roulier, rouleau, roulette, roulis,* round a root, *roul,* with the general sense of "circular movement;" yet in this case we know that this imaginary root *roul* is nothing else than the Latin substantive *rotula.* The error of the Sanskritists is really the same, though the loss of the parent-language prevents us from checking it with the same ease as when we are dealing with French. "Father" and "mother" must have had names in Aryan speech long before the suffix *tar* was attached to what we call the "roots" *pa* and *ma,* and Buschmann has shown that throughout the world these names are almost universally *pa* or *ta* and *ma.* Words like our *door,* the Latin *fores,* the Greek θύρα, the Sanskrit *dwâram* (*dur*), cannot be traced to any root; that is to say, a group of cognate words has either never existed, or else been so utterly forgotten and lost, that we can no longer tell what common type they may have represented. "A word like [the French] *car*," remarks M. Van Eys,[1] "could pass for a root if we did not know its derivation."

Roots, then, are the phonetic and significant types discovered by the analysis of the comparative philologist as common to a group of allied words. They form, as it were, the ultimate elements of a language, the earliest starting-point to which we can reach, the reflections of the manifold languages framed by the childhood of our race. Each family of languages has its own stock of roots, and these roots are the best representatives.

1 "Dictionnaire basque-français" (1873), p. v.

we can obtain of the vocabulary of primitive man. Like grammar and structure, roots, too, embody the linguistic instinct and tendency of a race; they are the mirror whereon we can still trace the dim outlines of the thought and mental point of view which has shaped each particular family of tongues. What the language is, that also are its roots; the roots of Chinese or Polynesian are as distinctively and characteristically Chinese or Polynesian as the roots of Aryan are Aryan. We have to extract them from the existing records of speech, and like the individual sounds of which words are composed, the character they assume will be that of the particular speech itself. "Unpronounced," says Prof. Pott,[1] "they fluttered before the soul like small images, continually clothed in the mouth, now with this, now with that, form, and surrendered to the air to be drafted off in hundredfold cases and combinations." They are, in fact, the product of the unconscious working of analogy; that potent instrument in the creation of language. The name given to an individual object becomes a type and centre of the ideas that cluster about it; sense and sound are mingled together in indissoluble union, and the instinct of speech transforms the combination into a root. Upon this root, or rather upon the analogy of the name that is the true source of the root, is built a new superstructure of words by the help of suffixes and other derivative elements. But the root and all the family of words that belong to it must remain the shadow and reflection of the original word from which it arose, and consequently display all the characteristics

[1] As quoted by Professor Max Müller, "Lectures," ii. p. 85.

of the words itself, and the language of which it forms part.'

Hence it is that the roots of a family of languages have the characteristics of the languages to which they belong. Thus the roots of a Semitic tongue are triliteral, consisting, that is to say, of three consonants, while the roots of the Finno-Ugrian dialects exhibit the same vowel-harmony as the developed dialects themselves.[1] Hence, too, it is that the roots given by lexicographers merely represent the oldest forms of words of which we know, and do not exclude the possibility that these words are really compounds, or that phonetic decay has acted upon them in some other way long before the earliest period to which our analysis can reach back. In certain cases, indeed, we have good proof that such a possibility has been an actual fact. Thus the Arabic root *'âm*, "to be orphaned," is a decayed form of an older *'âlam*,[2] and such co-existent Aryan roots as *vridh* and *ridh*, both signifying "growing," imply the loss of an initial letter, while it is only within the last few years that the labours of Dr. Edkins and M. de Rosny have given us any idea of the roots of Old Chinese. By the help of the old rhymes, of a comparison of the living dialects and of other similar sources of aid, Dr. Edkins has restored the pronunciation of Mandarin Chinese such as it was 2,000 or even 4,000 years ago.[3] Thus *yi*, "one," was once *tit*; *ta*, "great," was *dap*;

[1] Donner in the "Z. d. D. M. G.," xxvii. 4 (1873).

[2] Ewald: "Ausführliches Lehrbuch der Hebraischen Sprache" (8th edition), p. ix.

[3] See his "Introduction to the Study of the Chinese Characters" (1876).

ye, "to throw," was *tik*. There are words in which we can trace a continuous process of change and phonetic decay, *tsie*, "a joint," for instance, being *tsit* in the classical poetry, and since in Chinese *k* changes to *t*, and not contrariwise, while there is evidence that the word once ended in a guttural, we are carried back to a period earlier than 1100 B.C. for the time when *tsit* was still *tsik*. But even *tsik* is not the oldest form to which we can trace it back. *Tsik* is developed out of *tik*, and to *tik*, therefore, we must look for a representation of the root to which it and other allied words have to be referred.

Wherever ancient monuments, or a sufficient number of kindred dialects are wanting, the roots we assign to a set of languages will represent only their latest stage. The further we can get back by the help of history and comparison, the older the forms of the words we compare, the better will be the chance we have that our roots will reflect an epoch of speech, not so very far removed, perhaps, from its first commencement. The so-called "root-period" of the primitive Aryan, really means the analysis of the most ancient Aryan vocabulary, which a comparison of the later dialects enables us to make. Behind that "root-period" lay another, of which obscure glimpses are given us by the roots we can still further decompose. A series of words, for instance, like the Greek ὑσμίνη, and the Sanskrit *yudhmas*, presuppose a root *yudh(a)*, but when we remember other sets of words presupposing the roots *yu* ("joining together") and *dha* ("placing"), we are carried back to a time when the word signifying "battle," which embodied, as it were,

the root *yudh*, was itself a newly-formed compound meaning "conflict."

The existence of such a primary "root-period" is also made clear to us in another way. M. Bréal[1] draws attention to the number of homophonous roots in comparative dictionaries like those of Fick or Curtius; thus we have a root *kar*, "making" (Latin *creare*), another root *kar*, "mingling" (Greek κεράννυμι), and a third root *kar*, "cutting" (Latin *cernere*). So, too, in Old Chinese, as we have seen, there were homonyms like *tik*, "to throw," and *tik*, a "joint," which may both be referred to a root *t-k*. Now in the actual speech there was little danger of any confusion arising from the homophony of these roots. In Chinese, where phonetic decay has made such widespread ravages, an immense number of words has certainly come to assume the same outward appearance, but means have been found for distinguishing between them by the invention of "tones," and by recourse to writing. In the Aryan tongues, the words embodying such homophonous roots as those quoted just now are conjugated differently. Nevertheless, Chinese "tones" cannot claim a very much greater antiquity than Chinese writing, the spread of education producing a slovenly pronunciation, and the results of a slovenly pronunciation being obviated by the introduction of new tones, while we can follow the Aryan verb up to an age when it did not yet exist, and when, consequently, there were as yet no verbal flections. We cannot suppose, however, that language was at all less particular at this period about distinguishing between its words than it has been during

[1] "La Langue indo-européenne," p. 14.

the historical epoch; indeed, the observation of savage idioms proves that a barbarous dialect is much more careful to keep its words apart in pronunciation than a cultivated and literary one. The Frenchman with his written speech, his large vocabulary, and his practised keenness of intelligence, can far better afford to heap homophone upon homophone than the inhabitant of the Admiralty Islands. The Aryan *kar* and the Chinese *tik* alike show that the epoch of speech they represent has another behind it, when as yet the words embodying the ideas of "making," "mingling," and "cutting," or of "throwing," and "joint," had not coalesced in sound. The roots which represented this epoch are irrecoverable, because the words which contained them are lost, but we may feel sure that the words from which the homophonous roots are extracted, are but the worn relics and remains of those earlier ones.

Roots differ as the languages to which they belong differ; here they are monosyllabic, there they are polysyllabic. In the Polynesian family every consonant must be accompanied by a vowel; in Aryan two and even three consonants may follow one another; while in Semitic, and possibly Chinese, the root contains no vowel at all. It is probable that the majority of roots in most languages are of more than one syllable, and that if we could get back to the first stage of speech, we should find that this was universally the case. As Dr. Bleek has pointed out, such natural sounds as sneezing, and the like, can only be represented articulately by a succession of syllables, and since languages change mainly through the action of phonetic decay, we should expect

to find the words becoming more and more polysyllabic the further we mount back. Professor Whitney observes with truth that "*bow-wow* is a type, a normal example, of the whole genus 'root.'"[1] The sentence-words of primitive language were probably at least disyllabic, and the monosyllabism of Chinese or of the Taic and Bushman tongues would merely be an illustration of their vast antiquity and the long-continued action of phonetic decay. The roots of the Semitic languages are disyllabic, or if sounded with vowels trisyllabic, like *kadhala*, and the attempts that have been made to reduce them to a single syllable have all been failures. Böhtlingk[2] notes that many Tibetan words at present monosyllabic were formerly polysyllabic, and the polysyllabism of the roots of the Bâ-ntu family is well known. Such is also the case with the roots of Kanuri, Wolof, Púl, Maforian, and Malayo-Polynesian. In some of these instances monosyllabic roots stand by the side of polysyllabic ones, just as in Old Egyptian, where we find *keb*, "to go round," by the side of *kebehh*, *uonen*, "to be," by the side of *uon*. They stand out like the stray waifs of an otherwise extinct world, the last record of the first beginnings of speech. Like the child of the present day, the primæval speaker did not confine his utterances to a simple *ah!* or *oh!*

The Hindu grammarians reduced the roots of their language to single syllables, and comparative philology inherited from them the belief that the roots of the Aryan family are necessarily monosyllabic. Such is un-

[1] "Life and Growth of Language" (1875), p. 299.

[2] "Ueber die Sprache der Jakuten," p. xvii. note 46.

doubtedly the case with a root like *i* or *ya*, "going," but there are good grounds for believing that is not the case with most other roots. Thus a certain number of these roots end with the double consonant *kv* or *kw*, like *sakw*, "following" (Latin *sequor*), and whatever we may imagine to have been the pronunciation of such a sound, we can imagine none which would allow it to be pronounced without a vowel after it.[1] If, again, we compare the Latin *vectu* or *vectuī* with the Sanskrit *vodhavai*, and the Slavonic *vésti*, we can discover no bond of union between them, unless a root, *vaghi-tavai*, be presupposed. So, too, compound roots, like *yu-dh* for *yu-dha*, are necessarily disyllabic, and, as Fick has lately shown,[2] the so-called stems in *a*, *ya*, *i*, and *u*, are really rather roots than stems. We cannot separate words like ἄγο-ς and ἄγο-μεν, the Sanskrit *bhara-s*, *bhara-tha*, and *bhara-ti*, "he bears," any more than we can separate φόρο-ς and φέρε-τε, or φριξό-ς and ἐ-φρίξα-μεν. We cannot derive either the verb from the noun or the noun from the verb; they are co-existent creations, belonging to the same epoch and impulse of speech. The second vowel which characterizes both alike, therefore, cannot be a classificatory suffix; it distinguishes neither noun nor verb, but is the common property of both. What makes φόρο-ς a noun is the pure flection—the change of vowel in the first syllable. A form like *bhara-*, accordingly, cannot be treated

[1] In fact, De Saussure has shown that the velar *k* implied a following a^3 (*a* or *ā*, *o* or *ō*) when represented in Sanskrit by a guttural, a^1 or a^2 (*ĕ*, *ă*) when represented by a palatal ("Mémoires de la Société de la Linguistique de Paris"), and consequently *sakw-* (the Sanskrit *sach*) must have been followed by *ă* or *ĕ*.

[2] Bezzenberger's "Beiträge," i. pp. 1, 120, 231, 312, &c.

as a stem, because a stem is necessarily furnished with a classificatory suffix or some other mark to determine to what part of speech it belongs; we have nominal stems and verbal stems, but a stem which is at once nominal and verbal is not a stem but a root. It is the ultimate element, the phonetic type, contained by a group of allied words whose grammatical relations are indicated by varying contrivances. The so-called suffix *-ya* must be banished along with the suffix *-a*; "ἀγγελία is nothing else than ἀγγελγο declined as a noun, which appears as a verb in ἀγγελγο-μεν," and μαζός (μαδγο-ς) and the Latin *madeo* are equally based on a "root" *madya*. Even the "stems in *-as*" must lose their initial vowel; the classificatory suffix is *-s*, not the vowel, which is common to both nouns and verbs; and though there may seem to be a grammatical difference between the final vowels of ἧδος and ἡδύς, the difference vanishes when we compare the Greek μελι-ηδές on the one side and the Latin *argu-ere* on the other. Ἡδύς would seem to stand for ἡδε-Ϝε-ς. As Fick observes, even in the case of those nouns whose "root" agreed with that of the sigmatic future and aorist in possessing no vocalic ending, "the Indians with horrible consistency assumed a suffix—namely, the suffix Zero!"[1]

[1] In the fourth volume of Bezzenberger's "Beiträge" (1878), Fick shows that the stem of a present, like πείθω or φεύγω, is more original than the stem of the aorist ἐ-πιθ-ον, ἐ-φυγ-ον, the shortening of the vowel being occasioned by the accent which in the aorist fell upon the last syllable. Accordingly ᾱ, ῑ, and ῡ in the present are contracted into ᾰ, ῐ, and ῠ in the aorist, and ε disappears altogether. Fick further remarks that the old theory would logically make σπ, πτ, φν, and Ϝπ the roots of such verbs as σπέσθαι, πτέσθαι, πέφνε, and εἰπεῖν (= Ϝε-Ϝπεῖν), the final ε being considered "thematic," and

There is yet another reason for thinking that the majority of Indo-European roots—that is of the types which underlay the oldest Aryan vocabulary of which we know—must be regarded as polysyllabic. Prof. Max Müller[1] draws attention to the fact that the existence of parallel roots of similar meaning, but different terminations, like *mardh*, *marg*, *mark*, *marp*, *mard*, *smar*, and *mar*, can be better explained by *elimination* than by *composition*. The so-called determinatives or final letters cannot be classificatory, as they convey no modification of meaning, and are to be found in words belonging to all the parts of speech. "There is at all events no *à priori* argument against treating the simplest roots as the latest, rather than the earliest products of language." "It would be perfectly intelligible that such roots as *mark*, *marg*, *mard*, *mardh*, expressing different kinds of crushing, became fixed side by side, that by a process of elimination their distinguishing features were gradually removed, and the root *mar* left as the simplest form expressive of the most general meaning." In other words, the vocables

not belonging to the root. In the second part of the third volume of the same periodical (1879), Fick points out that, "through the influence of the accent the vowels *e* and *o* can be reduced to *ĕ* and *ŏ*, mere voice-checks, for which loss of the vowel can be substituted, especially in open syllables. This original *ĕ* and *ŏ*, which I call sh'wa for the sake of brevity, generally appears in Sanskrit as *i* or *ī* (also as *u* or *ū* before and after liquids), in Zend as *e* and *i*, in Greek mostly as *a*, in German as *o* (Gothic *u*)." "In the aorist the final sh'wa is retained in the *a* of the Greek aorist ἔγενας," &c. "Hence it is clear that stems like *ed*, *bhid*, or *ruḱ* had no existence whatever originally, but first arose out of *edĕ*, *bhidĕ*, and *ruḱĕ*; the Indian theory of roots, with all its perverse consequences (thematic and union vowels, Guna, &c.), must be definitely set aside."

[1] "Chips," iv. pp. 128, 129.

that embodied these roots underwent the wear and tear of phonetic decay, many of them passed out of the living speech and were replaced by others, and there was left at last a whole family of nouns and verbs, whose sole common possession was the syllable *mar*. That alone had resisted the attacks of time and change. We indeed have some difficulty in realizing the variability of savage and barbarous languages, or of the readiness with which new words are coined and old ones forgotten. Mr. Theal, illustrating the Kafir rule that a woman may not mention the names of any of her husband's male relations in the ascending line,[1] states that "a woman who sang the song of Tangalimlibo for me used the word *angoca* instead of *amanzi* for water, because this last contained the syllable *nzi*, which she would not on any account pronounce. She had therefore manufactured another word, the meaning of which had to be judged of from the context, as standing alone it is meaningless." It will be noticed that the word is trisyllabic, and not a monosyllable, as the Indianist theory would require, and if other words came to be framed after its model, it would originate a root, which would certainly be of more than one syllable. Phonetic decay alone could reduce it to the orthodox monosyllabic form.

The existence of compound roots has already been alluded to, implying a division of roots into simple and compound, the first class consisting of those which were really simple from the first, as well as of those which our ignorance prevents us from decomposing. Compound roots form part of the class of "secondary" roots as dis-

[1] "Cape Monthly Magazine," xiv. 36 (June, 1877), p. 349.

tinguished from "primary;" *yu* and *mar* being examples of primary roots, *yudh* and *yug*, *mardh*, *mard*, *marg*, *mark*, and *smar* of secondary ones. A primary root, therefore, is the simplest element of sound and meaning which can be extracted from a group of words; it constitutes their characteristic mark and sign of relationship, and indicates where the line of division must be drawn between them and other unallied words. A secondary root determines a species within the larger genus; words containing the root *mardh*, for instance, form a specific class within the wider class of those which contain the root *mar*. The Latin *ju-s*, "right" or "bond," is an example of the genus of which *jung-ere*, "to join," is an example of the species; but whereas in natural history a species is posterior to the genus, the converse is the case with the roots of the philologist. The reason of this is plain enough; the genera and species of zoology and botany answer to actually existing forms of life, whereas the roots of language are due to the reflective analysis of the grammarian. At the same time, some of the secondary roots are undoubtedly compounds, that is to say, are extracted from compound words, and wherever this is the case, the species or secondary root will necessarily be later than the primary or generic one.

One of the first attempts to decompose the secondary roots was made by Professor Pott. He started the view that a large number of them were compounded with prepositions; thus *pinj*, "painting," is derived from *api* or ἐπὶ and *anj*, "anointing." But such a view is no longer tenable. The loss of the initial vowel in a word like *api* is peculiar to Sanskrit, and not a characteristic of the

parent-Aryan; the origin of the Latin *ping-ere* would therefore be inexplicable. Moreover, the preposition was a late growth in Aryan speech, and in early times there was no close amalgamation of it with the verb. Even in Greek and Sanskrit the prepositions are still so independent that the augment and reduplication are inserted between them and the verbal form, and we all remember how loosely attached they are to the verb throughout the larger part of Homer. Pott's theory must therefore be given up, and another be proposed in its place. This has been done by Professor G. Curtius, who suggests that many of the compound roots were similar to such Latin tenses of a later day as *amav-eram* (for *amavi-eram*) and *amav-ero* (for *amavi-ero*), where we have two verbal forms agglutinated one to another. Hence in a secondary root like *yudh*, we may see an amalgamation of the two primary roots *yu* and *dha*, the first with the sense of "mingling," and the second with that of "placing." It is very possible that the Greek passive aorist ἐ-τύφ-θη-ν and optative τιμαο-ιη-ν may contain the roots *dha*, "placing," and *ya*, "going," which we find in the Latin *ven-eo*, *venum-ire*; at all events, the existence of such compounds in the parent-Aryan is shown to be more than a mere conjecture by the Latin *crēdo* which appears under the form of *'srad-dadhâmi* in Sanskrit. Sanskrit and Latin alike throw light on one another, and show us that *credere*, "to believe," is really a compound of *cor(d)*, "the heart," the Greek καρδία, and the root *dha*, "to place," which elsewhere appears in the Latin *ab-dere*, *con-dere*, *e-dere*.[1] "To believe" was therefore originally "to

[1] Darmesteter: "Mémoires de la Société de Linguistique," iii. p. 52.

place" or "set the heart" towards another object. How old the compound is may be gathered from the form it has assumed in Sanskrit. The ordinary word for "heart" in both Sanskrit and Zend presupposes a root *ghard*; *'srad* alone in this curious old compound has the same root, *kard*, as the words which signify "heart" in the European branch of the Aryan family. The parent-Aryan had its dialects like all spoken languages, and these dialects possessed slightly differing forms of the same word. One form finally triumphed in Western Aryan, another form in Eastern Aryan, but before this happened the compound *crêdo*, *'srad-dadhâmi*, was already in existence, testifying to a time when the West-Aryan form was employed in East Aryan itself.

A very common secondary root is one formed by reduplication. Originally the whole root was probably repeated; but in course of time broken reduplication became prevalent, consisting in the repetition of only a part of the whole root. Thus by the side of μάρμαρ-ος and *fur-fur* we find *me-mor* and πίπ(ε)τ-ω, *tu-tud-i* and τέ-τυπ-α. The loss of the second consonant might be compensated for; in the Greek λαίλαψ and δαιδάλεος, for instance, a diphthong marks the existence of a former consonant. On the other hand, the vowel of the second syllable might be lengthened or intensified, as in the Greek ἀγ-ωγή and ἐτ-ήτυμος, and when the second syllable was thus strengthened the vowel of the first syllable was very liable to become correspondingly weak. So in Latin we have *cĭ-conia* and *cĭ-catrix*, and in Greek δί-δάσκω for δι-δακ-σκω, and ἵστημι for σι-στημι. When the variation of vowel had once been introduced, the changes that could be

rung upon it were almost innumerable. We have seen how they were made subservient to the needs of flection in the Greek verb where the difference of the vowel in δί-δωμι and δέ-δωκα marked also a difference of tense.

But reduplication is one of those primitive contrivances of language which, though continually reappearing in the nursery dialect or thieves' slang, does not seem to be a favourite with a more cultivated age. There is hardly anything which is attacked with more persistency by phonetic decay than reduplication. *Did* alone bears witness to the reduplicated perfects of our Teutonic ancestors, and the reduplicated perfects of Latin are few and exceptional. A reduplicated root can sometimes be recovered only by a wide-reaching comparison of words, and even where this is not the case the original reduplication has often been so far obliterated as at first sight to escape observation. If we take the Greek βίος, "life," we shall have some difficulty in detecting any reduplication at all, and it is not until we come to the Latin *vivo* that the fact becomes clear to us. But *vivo* itself is but a fragment of its primitive self. The perfect *vixi* (*vic-si*) tells us that it has lost a guttural, and what this guttural was is only to be discovered by an appeal to the English *quick* and the Sanskrit *jîvitam*, "life." Both βίος and *vivo* are the bare and shattered relics of a word which contained the reduplicated root *gwi-gwi*.

Roots naturally display all the variability of the words in which they inhere. The vowel may change not only when they are reduplicated, but in other cases as well. By the side of *ar* in *aro*, "to plough," we have *er* in ἐρετμόν, "an oar," and *or* in ὄρ-νυμι, "to rise," and within the same

Greek verb itself we find ἔ-κταν-ε with *a*, κτείνω for κτεν-γ'ω with *e*, and ἔ-κτον-α with *o*. As we have seen before, in cases like φόρος by the side of φέρω, the change of vowel becomes a sign of flection, and we have to look to Sanskrit, where the single vowel *ă* answers to the three European vowels *ă*, *ĕ*, and *ŏ*, for our root. At other times instead of a change of vowel we find a change in the position of the consonant. Thus, if we compare the Greek ἀλφάνω and κρίνω with the Latin *labor* and *cerno*, or the Greek forms τλάω and τάλαντον with one another, we have vocalized consonants developing vowels in different positions. The root is ἀλφ- for Greek, and *lab-* for Latin. Again, the consonant itself may vary in two allied dialects, or even within one and the same dialect; in Greek, for instance, ἐλ-θεῖν and θάμβος stand by the side of ἔρχομαι (ἔρ-σκομαι) and ἔταφον, and the Latin *vivere* corresponds with the Greek βίος. Sometimes the consonant may become a vowel or a vowel become a consonant, as in λούειν, "to wash," the Latin *lavere*, or ὕδωρ, our *water*. The Latin *deus* and *divus*, like the Greek δῖος and δῆλος (for δεϝλος), go back to a root *div*, whereas the allied words Ζεύς and *Jupiter*, for Δγεύς and *Dyu-piter*, answering to a Sanskrit *dyaus-pitar*, presuppose a root *dyu*. Here we see *v* vocalized to *u* in the one case, and *i* hardened to *y* in the other. The roots have no existence apart from the words which contain them, and the phonetic variations of the words must therefore be faithfully represented in their corresponding roots.

Now just as words are divisible into two great classes, presentative and representative, conceptual and symbolic, predicative and pronominal, so too necessarily are roots.

There are pronominal and demonstrative roots, just as there are verbal or predicative ones, and since a root does but reflect the common characteristic of the group of words to which it belongs, pronominal roots, like the pronouns themselves, are short in outward form and symbolic in inward meaning. "Symbolic words," says Prof. Earle,[1] "are those which by themselves present no meaning to any mind, and which depend for their intelligibility on a relation to some presentive (or objective) word or words." They are what the Chinese call "empty" words, that is, words which have been stripped of their original nominal or verbal signification, and applied as auxiliaries and helpmeets to express the relations of a sentence. *Ki*, "place," *li*, "interior," or *ý*, "to use," for instance, have all become empty words with hardly a trace of their primitive meaning, *ki* being used as a relative pronoun, *li* and *ý* as mere signs of the locative and instrumental. The number of symbolic words in a cultivated and analytic language like English is very considerable; *a* or *an*, *the*, *but*, *from*, *if*, *of*, *is*, *there*, *then*, and the pronouns generally will occur at once to the mind of everyone. Many of these symbolic words, like the "empty words" of Chinese, can be traced back to a time when they were still predicative, when they still denoted objects and attributes, and could be used as predicates of the sentence. Others of them, however, have lost all vestiges of any such predicative meaning, if ever they possessed it; even during the earliest period at which we become acquainted with them they are already sym-

[1] "Philology of the English Tongue" (2nd edition), p. 222. See Locke's "Essay on the Understanding," iii. ch. vii. ("On Particles.")

bolic, already mere marks of relation. This is especially the case with the pronouns, and since most of the pronouns can be shown to have once had a demonstrative sense, those roots which are not verbal or predicative have been termed sometimes pronominal, sometimes demonstrative. Pronominal or demonstrative roots form a smaller class by the side of the predicative ones. Constant use and close amalgamation with other words tend to attenuate symbolic words, and cause them to be especially affected by the action of phonetic decay; hence it is that pronominal roots consist for the most part of open syllables like *ka*, *na*, *ma*, *ta*. We may describe them, in fact, as consisting of only one consonant, the initial letter of those little but important words which they represent. It has often been proposed to identify the classificatory suffixes of a flectional language with these attenuated pronominal roots, and appeal has been made to the fact that the person-endings of the verb—*ad-mi*, *at-si*, *at-ti*—actually are personal pronouns. It is difficult, however, to see what else they could be, since the persons of the verbs necessarily imply the personal pronouns, and the fact in question, therefore, gives no support to a theory which assumes the existence of pronouns where no pronominal meaning can be attached to them. Decay, it is true, attacks the meaning as well as the sounds of words, and what was once significant may afterwards cease to be so; but before we can admit the hypothetical presence of pronouns or pronominal roots, we must be assured of the appropriateness or even the possibility of the meanings to be assigned to them. The similarity that exists between the phonetic form of many

of the suffixes and that of the pronominal roots can be accounted for very simply by the attenuated character of these roots. Now and then, however, a similarity has been assumed that does not exist. Thus the guttural suffix *ka* can have nothing to do with the "root" of the Latin *quis*, the Greek τις and the Sanskrit *chit*, "somewhat," since the guttural here is velar; and as Prof. Ludwig has pointed out,[1] the "pronominal" *ta* which plays so great a part in the ordinary analysis of flectional forms is a pure nonentity, as *t* is always followed by the vowel *i*. In fact, the identification of suffixes and "demonstrative roots" is due to a confusion of ideas; suffixes can have no roots; they are only parts of words, common to nearly all groups of words alike, and varying continually within the same group. But groups of words alone can be said to possess roots, and if we assign roots to symbolic words, it is because they also, like the predicative words of the sentence, fall into groups. The root is a property of words, not of their suffixes.

It is highly probable that even those words which we find acting as auxiliaries and pronouns as far back as our linguistic analysis allows us to go, were themselves once full or predicative words, and that if we could penetrate to an earlier stage of language, we should meet with the original forms of which they are the maimed and half-obliterated descendants. Analogy certainly is in favour of this view. Such symbolic words as *an* (*one*) or *will*, of which we have a history, are known to have been formerly presentative, and there is nothing to prevent other symbolic words, with whose history we are

[1] "Agglutination oder Adaptation" (1873), p. 18.

unacquainted, from having been so too. The relative pronoun in Chinese can be proved to have once been a substantive meaning "place," and it would seem that the Hebrew relative *'asher* had the same origin, *'asru* in Assyrian, *'athar* in Aramaic signifying "a place." The Assyrian pronoun *mala*, "as many as," is merely a fossilized substantive meaning "fulness," and the Ethiopic *tălī* and *cīyā*, which, when combined with suffixes, express the nominative or accusative of the personal pronoun, really signified originally "separation" and "entrails."[1] The Malay *ulun*, "I," is still "a man" in Lampong, and the Kawi *ngwang*, "I," cannot be separated from *nwang*, "a man." In Japanese the same word may stand for all three persons; but this is because it was primitively a substantive, such as "servant," "worshipper," and the like. Even now the Chinese scholar will say, *ts'ie* ("the thief") instead of "I," while *tsiăn* ("bad") and *ling* ("noble") are used for "mine" and "thine."[2] "The inhabitants of Ceylon," says Adelung,[3] "have seven or eight words to denote the second personal pronoun," and Pott remarks[4] that even German is still so much influenced by the habits of an earlier barbarism as scrupulously to avoid the employment of the second personal pronoun, recourse being had, where *Er* and *Sie* fail, to the uncivilized method of denoting the personal pronoun by means of a substantive. In Greek we find ὅδε ὁ ἀνήρ used as the equivalent of "I," and a somewhat unsatis-

[1] Prätorius: "Z. d. D. M. G." xxvii. 4 (1873).
[2] Endlicher: "Chines. Grammatik," pp. 258-89.
[3] "Mithridates," i. 233.
[4] "Die Ungleichheit menschlicher Rassen," pp. 5, 6.

factory attempt has been made to derive this pronoun itself, the Latin *ego*, the Sanskrit *aham*, from the root *agh*, "speaking," which we have in the Latin *ad-agi-um*, "a proverb," the Greek ἀ-μί, and the Gothic *af-aik-an*, "to deny." However this may be, we must always bear in mind the possibility of tracing symbolic words to conceptual ones, and of discovering that what we have imagined to be the pronominal root is really a reduced and mutilated form. Above all, we must not fall into the mistake of confounding these pronominal roots with the classificatory suffixes, a mistake which has been perpetrated in the classification of roots as material and formal. It is perfectly true that some of the suffixes, such as *-tar*, or our own *-ward*, or the person-endings of the Aryan verb, can be referred to old nouns and pronouns; but what is true of some of them is not true of all, while even these suffixes are not identical with pronominal roots but belong to groups of words containing both pronominal and predicative roots.

And so we are brought back to our starting-point. Roots are the phonetic and significant types which underlie a group of words in a particular family of speech. Each family of speech has its own stock of roots, its own common heritage of words, which serve, like its grammar and its structure, to mark it off from every other family. We have seen how the various races of man have started with different grammatical conceptions and modes of constructing the sentence; they have equally started with different lexical types. Roots are for the dictionary what the mental ways of viewing the relations of the sentence are for grammar. Allied lan-

guages must agree in their roots as well as in their grammar.

But it is not necessary that the roots possessed by each member of a family of speech should all be the same. We find cases and case-endings in Latin which do not exist in Greek, while the Greek terminations in -θι and -θεν are equally unknown to Latin. Similarly in the vocabulary, one dialect may retain words which have been lost by another, or drop words which are in use in the remaining cognate tongues. This is one of the causes of the difficulty experienced by etymologists in finding a derivation for every word in the lexicon, that is to say in settling the root to which it must be referred. Unless we have allied words in cognate dialects with which to compare our recalcitrant word, no etymological tact or scientific attainments will enable us to determine its roots and connections. The logicians tell us that we can draw no inference from a single instance; it is just as impossible to discover an etymology for an isolated word. But there may be other reasons for this impossibility besides the simple one that a word may be the last waif and stray of an otherwise extinct group. Languages borrow words from their neighbours, and it may very well happen that the word whose derivation we are seeking may be a foreign importation which has slightly changed its appearance in being naturalized. We know from Livy (vii. 2) and Festus[1] that the Latin *histrio* (*hister*), "a play-actor," and *nepos*, "a spendthrift," were borrowed from Etruscan, and the inscriptions have further informed us that the Latin *Aulus* was originally the

[1] Ed. Müller, p. 165.

Etruscan *Avile*, "the long-lived one," but there is little doubt that many words exist in Latin which were also introduced from Etruria, but of whose parentage our ignorance of the old Etruscan language forbids us to give any account. *Maize* and *hammock* seem genuine English words enough, but they have come to us through the medium of Spanish from the dialect of the natives of Hayti.[1] To search for their etymology in the Aryan family of speech would be parallel to M. Halévy's endeavour to explain agglutinative Accadian from the Semitic lexicon. But there is yet a third reason for the existence of roots peculiar to only one out of a group of allied languages. Even in its most advanced and cultured state, language never wholly resigns its power of creating new words, and with them new roots. It is true that the inventions of the nursery are nipped in the bud or confined within the nursery walls; it is also true that words like the Kafir *angoca*, mentioned before, could never be introduced into literary idioms like English and French; but it is also true that the native instinct of language breaks out wherever it has the chance, and coins words which can be traced back to no ancestors. The slang of the schoolboy, the *argot* of the large towns, Americanisms, and thieves' cant, all contain evidences that the creative powers of language are even now not extinct. The murderer Pierre Rivière invented the word *ennepharer* for the torture to which, as a boy, he subjected frogs, and the word *calibène* for the instrument with which he killed birds.[2] Prince "Plon-plon" can be assigned no

[1] Humboldt: "Travels" (Engl. transl.), i. p. 329.
[2] Charma: "Essai sur le Langage" (1846), p. 66.

parentage, any more than the game of *squails* with its *swoggle* and *absquatulate*. Du Mérit refers to the purely musical names given by children to those they are fond of, and Nodier tells a curious story to account for the origin of a lady's *falbala*.[1] A witty prince of the last century, Marshal de Langlée, entered a shop with the intention of testing the assurance of the milliner in it. He therefore coined the word *falbala* on the spot, and immediately asked for one. The milliner at once brought him the dress called *volant*, which with its light floating points reminded her of the root involved in the newly-invented word, and perhaps called up the sound and signification of *folâtre* or *flotter*.[2] Even natural science has added to the stock of Aryan roots. To pass over Van Helmont's *gas*, Neckar invented *sepal* to denote each division of the calyx,[3] Reichenbach the expression "Od force," and Guyton de Morveau the chemical terms *sulfite* and *sulfate*. Here, however, we have a reference to *sulphur*, just as M. Braconnot's *ellagic acid*, the substance left in the process of making pyrogallic acid, is merely *galle* read backwards.[4] To find the process of word-making in full vigour, we must look elsewhere than to the scientific age. We have something better to do than to spend our time in inventing new words; that employment must be left to the disciples of Irving and other theological enthusiasts. The heritage we have received is large enough for our wants; our part is to

[1] "Notions de Linguistique," p. 211.

[2] *Falbala* has been borrowed by most of the European languages under various forms, appearing in English as *furbelow*. It is first found in De Caillières (1690).

[3] Whewell: "History of the Inductive Sciences," ii. p. 535.

[4] Whewell: *op. cit.* ii. p. 547.

improve and develop it. But the case is very different with the savage tribes of the modern world or the still more savage tribes among whom the languages of the earth first took their start. With them language is still a plaything; a plaything, it may be, which has a mysterious influence for good or ill, but nevertheless a plaything which may help to while away the long hours of the day. Hence it is that the vocabularies of the lower races are in a perpetual state of flux and change; the word which is in fashion one day is dropped the next, and its place taken by a fresh favourite. But they are words and not roots which are thus suddenly called into existence. The Kafir woman coins a fully-formed word, not the root which we can extract from it. Here, as elsewhere in nature, the complex precedes the simple, the embryonic jelly-fish is older than man. What is logically first is historically last.

Roots, however, are one of the instruments with which the comparative philologist determines and classifies his families of speech. We have seen that languages may be arranged morphologically as polysynthetic, incorporating, isolating, agglutinative, inflectional, and analytic; we have further seen that grammar forms our first and surest ground for asserting or denying the relationship of languages; but besides similarity of structure and grammar we must also have a common stock of roots before we can throw a group of languages and dialects together, and assert their connection one with another. The genealogical classification of languages, that which divides them into families and sub-families, each mounting up, as it were, to a single parent-speech, is based on the evidence of grammar and roots. Unless the grammar

agrees, no amount of similarity between the roots of two languages could warrant us in comparing them together, and referring them to the same stock. Accidental resemblances of sound and sense between words are to be found all the world over, and the probable origin of language in great measure from the imitation of natural sounds, or the cries uttered during the performance of a common action, would produce superficial likenesses between the roots of unallied tongues. But on the other hand, where we find dissimilar roots combined with grammatical agreement, it is necessary to hesitate before admitting a genetic relationship. There are instances, indeed, in which nearly the whole of a foreign vocabulary has been borrowed, whereas a borrowed grammar is a doubtful, if not unknown occurrence; but, nevertheless, such instances are rare, and we must have abundant testimony before they can be admitted. The test of linguistic kinship is agreement in structure, grammar, and roots. Judged by this test, the languages at present spoken in the world probably fall, as Prof. Friedrich Müller observes,[1] into "about 100 different families," between which science can discover no connection or relationship. When we consider how many languages have perished since man first appeared on the globe, we may gain some idea of the numberless essays and types of speech which have gone to form the language-world of the present day. Language is the reflection of society, and the primitive languages of the earth were as infinitely numerous as the communities that produced them. Here and there a stray waif has been left of an otherwise

[1] "Grundriss der Sprachwissenschaft," i, 1. p. 77.

extinct family of speech. The isolated languages of the Caucasus, or the Basque of the Pyrenees, have remained under the shelter of their mountain fastnesses to tell of whole classes of speech which have been swept away. It is but the other day that the last Tasmanian died, and with him all trace of the four Tasmanian dialects which our colonists found on their arrival in the island. Etruscan seems to be a language *sui generis*, the remnant probably of a family which once spread over the present Tyrol; and all that we know of Etruscan is contained in some three thousand short inscriptions, bristling with proper names, and only half-decipherable. "Nature," said Aristotle, "does nothing sparingly,"[1] and the myriad types of life that she has lavished upon the globe are but the analogue and symbol of the types of language in which the newly-awakened faculty of speech found its first utterance. So far as the available data allow, the existing languages of the world may be classified as follows, though it must be remembered that in many cases our information is scanty and doubtful, and languages here grouped under a single head may hereafter turn out to be distinct and unrelated.[2]

I. Bushman (agglutinative and isolating):—Baroa: ǃKhuai: &c.[3]

[1] "Polit." i. 1.

[2] The list of linguistic families, as well as the leading authorities upon them, are taken from Dr. Friedrich Müller's "Grundriss der Sprachwissenschaft" (1876), i. 1. pp. 82-98, with modifications and additions. The obelus (†) denotes that the language mentioned is extinct.

[3] Dr. Bleek: in "The Cape and its People, and other Essays," edited by Prof. Noble (1869), p. 269, *sq.*; Bleek: "A Brief Account of Bushman Folklore and other Texts" (1875); Hahn: in "Jahres-

II. Hottentot (semi-inflectional):—Namaqua : ! Kora : †Cape dialect: Eastern dialects.[1] Perhaps a dialect spoken near Lake Ngami is to be included.[2]

III. Kafir or Bâ-ntu (prefix-pronominal):—

(α). Eastern: Zulu; Zambesi. (Barotse, Bayeye, Mashona); Zanzibar (Kisuahili, Kinika, Kibamba, Kihiau, Kipokomo).

(β). Central: Setshuana (Sesuto, Serolong, Sehlapi).

(γ). Tekeza (Mankolosi, Matonga, Mahloenga).

(δ). Western: Herero; Bunda; Londa; Congo, Mpongwe, Dikele, Isubu, Fernando-Po, Dualla or Dewalla.[3]

berichte des Vereins für Erdkunde zu Dresden," vi. and vii. (1870), pp. 71-73; Fr. Müller: "Grundriss d. Sprachw." i. 2, pp. 25-89; MS. grammar by Rev. C. F. Wuras, in Sir G. Grey's Library, Cape-town.

[1] Bleek: "Comparative Grammar of South African Languages" (1862 and 1869); Tindall: "Grammar of Namaqua Hottentot;" Wallmann: "Die Formenlehre der Namaqua-Sprache" (1857); Hahn: "Die Sprache der Nama" (1870); Fr. Müller: "Gr. d. W." i. 2, p. 189; Grammar of the ! Kora dialect in Appleyard: "The Kafir Language" (1850), pp. 17, *sq.*; vocabularies of Cape Hottentot in Witsen (1691), and "Cape Monthly Magazine," Jan. and Feb. 1858.

[2] This is Miss Lloyd's opinion, who has heard it spoken. She thinks it resembles Namaqua.

[3] Bleek: "Comp. Gram. of S. African Lang.;" Brusciotto: "Regulæ quædam pro Congensium idiomatis faciliori captu" (Rome, 1659); Appleyard: "The Kafir Language" (1850); Bishop Colenso: "Grammar of the Zulu Language" (1859); Grout: "The Isizulu; a Grammar of the Zulu Language" (1859); Steere: "A Handbook of the Swahili Language" (1870), and "Collections for a Handbook of the Yao Language" (1875); Archbell: "A Grammar of the Bechuana Language" (1837); Clarke: "Introduction to the Fernandian Tongue" (1848); Saker: "Grammatical Elements of the Dualla Language" (1855); Krapf: "Outline of the Elements of the Kisuáheli Language, with special reference to the Kinika

IV. Wolof[1] (agglutinative):—Kayor: Walo: Dakar: Baol: Gambia.

V. Mende (agglutinative):—Mandingo: Bambara: Susu: Vei: Kono: Tene: Gbandi: Landoro: Mende: Gbese: Toma: Mano.[2]

VI. Felup (agglutinative):—Felup: Filham: Bola: Sarar: Pepel: Biafada: Pajade: Baga: Kallum: Temne: Bullom: Sherbro: Kisi.[3]

VII. Central-African (isolating):—Sonrhay: Hausa: Landoma: Limba: Bulanda: Nalu: Banyum: Bijogo.[4]

VIII. Bornu (agglutinative):—Kanuri: Teda: Kanem: Nguru: Murio.[5]

IX. Kru (agglutinative):—Grebo: Kru.[6]

dialect" (1850); Cannecattim: "Collecçao de Observacoes Grammaticaes sobre a Lingua Bunda ou Angolense" (1805); Hahn: "Grundzüge einer Grammatik der Herero-Sprache" (1857); Le Berre: "Grammaire de la Langue Ponguée" (1873).

[1] Dard: "Grammaire Wolofe" (1826); Boilat: "Grammaire de la Langue commerciale du Sénégal ou de la Langue wolofe" (1858).

[2] Steinthal, H.: "Die Mande-Neger Sprachen" (1867); Koelle: "Outlines of a Grammar of the Vei Languages" (1854). [For an account of the Vei syllabary invented by Momoru Doalu Bukere or Mohammed Doalu Gunwar, Doalu meaning "Bookman," see Steinthal: "Mande-Neger-Sprachen," p. 257, *sq.*, and Koelle: "Outlines."]

[3] Schlenker: "Grammar of the Temne Language" (1864); Nyländer: "Grammar and Vocabulary of the Bullom Language" (1814).

[4] Barth: "Sammlung central-afrikanischer Vocabularien" (1862-1866); Schön: "Grammar of the Hausa Language" (1862).

[5] Kölle: "Grammar of the Bornu or Kanuri Language" (1854); Norris and Richardson: "Grammar of Bornu or Kanuri, with Dialogues, Vocabulary, &c." (1853).

[6] "A Brief Grammatical Analysis of the Grebo Language" (Cape Palmas, 1838, 8vo.).

X. Eve (agglutinative) :—Eve : Yoruba : Oji or Ashanti : Fanti or Inta : Ga or Akra.[1]

XI. Nubian (agglutinative) :—

(α). Fulah or Poul dialects (Futatoro, Futajallo, Bondu, Sokoto).[2]

(β). Nuba dialects (Tumale, Nubi, Dongolawi, Koldagi, Konjara).[3]

(γ). Wakuafi : Masai.[4]

XII. Ibo (agglutinative) :—Ibo : Nupe.[5]

XIII. Nile Group (agglutinative) :—Barea : Bari : Dinka : Nuer : Shilluk.[6]

XIV. & XV. Unclassified Negro-languages :—

(α). Isolating :—Mbafu : Maba : Michi.

(β). Agglutinative :—Musgu : Batta : Logone : Baghirmi.[7]

[1] Schlegel : "Schlüssel zur Ewe-Sprache" (1857) ; Bowen : "Grammar and Dict. of the Yoruba Language" (Smithsonian Inst. 1858); Crowther: "Grammar and Vocabulary of the Yoruba Language, with Introductory Remarks by O. E. Vidal" (1852) ; Riis : "Elemente des Akwapim-Dialektes der Odschi-Sprache" (1853) : Zimmermann: "A Grammatical Sketch of the Akra- or Ga-Language, with an Appendix on the Adamme-dialect" (1858); Christaller: "Grammar of the Asante and Fante language" (1876).

[2] Macbrair: "Grammar of the Fulah Language" (1854); Faidherbe in the "Revue de Linguistique et de philologie comparée," vii. pp. 195, *seq.* (1875).

[3] Tutschek in the "Gelehrte Anzeigen der k. bayer. Akademie der Wissenschaften," xxv. p. 729, *seq.*

[4] Krapf : "Vocabulary of the Enguduk Eloikob, spoken by the Masai in East Africa" (1857).

[5] Schön : "Oku Ibo, Grammatical Elements of the Ibo Language" (1861).

[6] Mitterutzner: "Die Dinka-Sprache in Central-Afrika" (1866); and "Die Sprache der Bari in Central-Afrika" (1867); F. Müller : "Die Sprache der Bari" (1864); Reinisch: "Die Barea-Sprache" (1874).

[7] See Barth : "Sammlung central-afrikanischer Vocabularien" (1862-6).

XVI. Hamitic (inflectional):—

(α). † Old Egyptian:[1] † Coptic.[2]

(β). Sub-Semitic or Libyan: † Numidian:[3] † Guanches of Canaries:[4] Berber, Kabyle, Tamashek, &c.[4]

(γ). Ethiopian: Beja, Denkâli, Somâli, Galla, Agaü, Saho.[5]

XVII. Semitic[6] (inflectional):—

(α). Northern: † Assyro-Babylonian;[7] † Phænico-

[1] Brugsch: "Hieroglyphische Grammatik" (1872), and "Grammaire démotique" (1855); Le Page Renouf: "An Elementary Manual of the Egyptian Language" (1876).

[2] Schwartze: "Koptische Grammatik" (1850); Revillout in "Mélanges d'Archéologie Egyptienne et Assyrienne," ii. 2, 3, iii. 1, (1875-6); F. Rossi: "Grammatica Copto-Geroglifica" (1878).

[3] See Pritchard: "Researches into the Physical History of Mankind," iii. 2, 2, p. 32; and De Macedo in the "Journal of the Royal Geographical Society," 1841, pp. 171-183.

[4] Hanbteau: "Essai de Grammaire Kabyle" (1858); and "Essai de Grammaire de la Langue Tamachek" (1860); Faidherbe: "Collection complète des Inscriptions numidiques," in the "Mémoires de la Société des Sciences, etc., de Lille," viii. p. 361 (1870).

[5] Isenberg: "A small Vocabulary of the Dankali Language" (1840); Tutschek: "A Dictionary and Grammar of the Galla Language" (1845); Halévy: "Essai sur la Langue agaou" (1874); Munzinger: "Ost-Afrikanische Studien" (1864); Prätorius in the "Z. D. M. G." xxiv. (1870); Pott in the "Z. D. M. G." xxiii. (1869).

[6] Renan: "Histoire des Langues sémitiques" (2nd edit. 1858); Castell: "Lexicon Heptaglotton" (1669).

[7] Oppert: "Grammaire assyrienne," 2nd edit. (1868); Sayce: "An Assyrian Grammar for Comparative Purposes" (1872), "An Elementary Assyrian Grammar and Reading-book," 2nd edit. (1876), and "The Tenses of the Assyrian Verb," in the "J. R. A. S." Jan. 1877; Schrader: "Die assyrisch-babylonischen Keilinschriften," in the "Z. D. M. G." xxvi. 1, 2 (1872).

Hebrew ;[1] † Punic ; Samaritan ;[2] Aramaic († Chaldee, † Syriac, † Mandaite, Neo-Syriac).[3]

(β). Southern : † Gheez (Ethiopic) ;[4] Amharic ;[5] Tigre (Tigrina) ;[6] Harari ;[7] † Himyaritic (Sabean) ;[8] Mehri ;[9] † Ehkili ;[9] Arabic ;[10] † Sinaitic ;[11] † Safa ;[12] Maltese.[13]

[1] Gesenius: "Hebrew Grammar," edit. by Rödiger (Engl. trans. 1869); Ewald: "Ausführliches Lehrbuch der hebräischen Sprache des Alten Bundes," 8th edit. 1870; Olshausen: "Lehrbuch der hebräischen Sprache" (1861); Land: "Principles of Hebrew Grammar" (transl. by Poole, 1876); Schröder: "Die Phönizische Sprache" (1869); Driver: "Use of the Tenses in Hebrew" (1874).

[2] Petermann: "Brevis linguæ Samaritanæ grammatica" (1873); Nichols: "Grammar of the Samaritan Language" (1859); Uhlemann: "Institutiones Linguæ Samaritanæ" (1837).

[3] Merx: "Grammatica Syriaca" (1867-70); Hoffmann: "Grammatica Syriaca" (1827); Uhlemann: "Grammatik der syrischen Sprache" (2nd edit. 1857); Nöldeke: "Grammatik der neu-syrischen Sprache am Urmia-See und Kurdistan" (1868), and "Mandäische Grammatik" (1875).

[4] Ludolf: "Grammatica Æthiopica" (1661); Dillmann: "Grammatik der aethiopischen Sprache" (1857); Schrader: "De lingua Ethiopica cum cognatis linguis comparata" (1860).

[5] Isenberg: "Grammar of the Amharic Language" (1842); Massaja: "Lectiones grammaticales pro missionariis qui addiscere volunt linguam Amaricam" (1867).

[6] Praetorius: "Grammatik der Tigrinasprache" (1871-2).

[7] Praetorius in "Z. D. M. G." xxiii. (1869).

[8] Prideaux: "A Sketch of Sabean Grammar" in the "Transactions of the Society of Biblical Archæology," v. 1, 2 (1877).

[9] Von Maltzan in "Z. D. M. G." xxvii. 3 (1873).

[10] Wright: "Arabic Grammar," 2nd edit. (1874-6); De Sacy: "Grammaire arabe," 2nd edit. (1831); Ewald: "Grammatica critica linguæ Arabicæ" (1832).

[11] Beer: "Inscriptiones veteres Litteris et Lingua huc usque incognitis ad montem Sinai servatæ" (1840-3); Tuch in the "Z. D. M. G." xiv. (1849).

[12] Halévy in the "Z. D. M. G." xxxii. 1. (1878).

[13] Schlienz: "On the Maltese Language" (1838).

XVIII. Aryan or Indo-European (inflectional)[1]:—

(*a*). Indian Group: † Sanskrit;[2] † Prakrit;[3] † Pali, Singalese or Elu[4] (see under DRAVIDIAN); modern vernaculars (Bengalese, Assamese, Oriya, Nepaulese, Kashmirian, Scindhi, Punjâbi, Brahui, Gujarati, Marâthi, Hindi, Hindustani);[5] Siyâh-pôsh-Kafir;[6] Dard;[7] Rommany (Gipsy), with 13 European dialects.[8]

[1] Bopp: "Vergleichende Grammatik des Sanskrit, Zend, Griechischen, Lateinischen, Lithauischen, Altslavischen, Gothischen und Deutschen" (1833-52, 3rd edit. 1868-70; English translation by Eastwick from the first edit. 1845); Schleicher: "Compendium der vergleichend. Grammatik der indo-germanischen Sprachen" (1861, 3rd edit. 1871; English translation by Bendall, 1874).

[2] Benfey: "Handbuch der Sanskritsprache" (1852-54); Max Müller: "A Sanskrit Grammar for Beginners," 2nd edit. (1870); Monier Williams: "Practical Grammar of the Sanskrit Language," 3rd edit. (1864); Delbrück: "Das altindische Verbum" (1874).

[3] Lassen: "Institutiones linguæ Pracriticæ" (1837).

[4] Kuhn: Beiträge zur Pali-Grammatik (1875); Minayeff: "Grammaire Pâlie" (1874); Carter: "Lesson-book of Singhalese, on Ollendorf's System" (1873); Lambrick: "Sinhalese Grammar" (1834).

[5] Cust: "A Sketch of the modern Languages of the East Indies" (1878); Beames: "A Comparative Grammar of the modern Aryan Languages of India" (1872); Forbes: "A Grammar of the Bengali Language" (1862); Sutton: "An Introductory Grammar of the Oriya Language" (1831); Trumpp: "Grammar of the Sindhi Language" (1872); "A Grammar of the Panjabi Language" (Lodiana, 1851); Yates: "Introduction to the Hindustani Language" (1845); Garcin de Tassy: "Rudiments de la Langue hindoui" (1847); Shapurji Edalji: "A Grammar of the Gujarati Language" (1867); "The Student's Manual of Marathi Grammar" (Bombay, 1868).

[6] Trumpp in "Z. D. M. G." xx. (1866).

[7] Leitner: "Results of a Tour in Dardistan" (1868).

[8] Pott: "Die Zigeuner in Europa und Asien" (1844-5); Paspati: "Études sur les Tchinghianes" (1870); Miklosich: "Ueber die Mundarten und Wanderungen der Zigeuner Europa's" (1872-77); Ascoli: "Zigeunerisches" (1865).

(β). Iranian Group: † Old Persian (Achæmenian);[1] † Pahlavi;[2] Parsi;[3] Neo-Persian;[4] Kurdish;[5] Beluchi;[6] † Zend (Old Baktrian);[7] Pukhtu (Afghan);[8] Ossetian.[9] Armenian[10] is generally included in this group.

(γ). Keltic Group: Insular (Welsh, †Cornish, Breton,[11] Irish, Manx, Scotch); †Continental (†Gaulish).[12]

(δ). Italian Group: † Umbrian;[12] † Oscan;[13] † Latin;[14]

[1] Spiegel: "Die altpersischen Keilinschriften" (1862); Kossowicz: "Inscriptiones Palæo-Persicæ" (1872).

[2] Spiegel: "Grammatik der Huzvâresch-Sprache" (1856); Haug: "An old Pahlavi-Pazend Glossary" (1870).

[3] Spiegel: "Grammatik der Parsi-Sprache" (1851).

[4] Vullers: "Grammatica linguæ Persicæ" (2nd edit. 1870).

[5] Friedrich Müller: "Beiträge zur Kenntniss der neupersischen Dialekte" in the "Sitzungberichte der k. Akademie der Wissenschaften zu Wien," xlvi. and xlviii. (1864-65); Garzoni: "Grammatica e Vocabulario della lingua Kurda" (1787); Chodzko: "Études philologiques sur la Langue Kurde" (1857).

[6] See Mockler's Grammar of the Mekráni dialect (London, 1877).

[7] Justi: "Handbuch der Zendsprache" (1864); Hovelacque: "Grammaire de la Langue zende" (1872); Haug: "Essays on the Parsis," edit. by West, in Trübner's "Oriental Series" (1878); Bartholomae: "Das altiranische Verbum" (1878); Hübschmann, in Kuhn's "Zeitschrift," xxiv. 4 (1878).

[8] Trumpp: "Grammar of the Pashto, or Language of the Afghans" (1873).

[9] Sjögren: "Ossetische Sprachlehre" (1844).

[10] Petermann: "Grammatica linguæ Armeniacæ" (1837); Hübschmann, in Kuhn's "Zeitschrift," xxiii. 1, 3 (1877); Cirbied: "Grammaire de la Langue arménienne" (1823).

[11] Zeuss: "Grammatica Celtica" (2nd edit. 1871); Rhŷs: "Lectures on Welsh Philology" (2nd edit. 1879).

[12] Aufrecht and Kirchhoff: "Die umbrischen Sprachdenkmäler" (1849-51); Bréal: "Les Tables Engubines" (1875).

[13] Bruppacher: "Oskische Lautlehre" (1869); Enderis: "Versuch einer Formenlehre der oskischen Sprache" (1871).

[14] Corssen: "Ueber Aussprache, Vokalismus und Betonung der

Neo-Latin or Romanic (Italian, Sardinian, Gallo-italic, French, Provençal, Catalan, Spanish, Portuguese, Rumansh, Friulian, Rumanian);[1] † Messapian (Iapygian).[2]

(ε). Thrako-Illyrian Group: † Thrakian;[3] Albanian.[4]

(ζ). Hellenic Group: † Phrygian;[5] † Greek;[6] Modern Greek.[7]

lateinischen Sprache" (2nd edit. 1868-70); and "Kritische Beiträge zur lateinischen Formenlehre" (1863-66); Draeger: "Historische Syntax der lateinischen Sprache" (1874-8); Roby: "A Grammar of the Latin Language" (1872-4).

[1] Diez: "Grammatik der romanischen Sprachen" (1836, 3rd edit. 1870) and "Etymologisches Wörterbuch der romanischen Sprachen" (1853) (4th edition with additions by Scheler, 1878); Prince L-L. Bonaparte: "Remarques sur les Dialectes de la Corse" (1877); Lemcke's "Jahrbuch für romanische und englische Literatur," since 1860; Boehmer's "Romanische Studien," since 1871; "Revue des Langues romanes," since 1870; "Romania," since 1872; "Rivista di filologia romanza," since 1872; Ascoli: "Archivio glottologico italiano," since 1873; Brachet: "Grammaire historique de la Langue française" (1873); Littré: "Histoire de la Langue française" (1863).

[2] Mommsen: "Die unteritalischen Dialekte" (1850).

[3] Böttcher: "Arica" (1851) [Lagarde: "Gesammelte Abhandlungen," 1866].

[4] Von Hahn: "Albanesische Studien" (1853); Camarda: "Saggio di grammatologia comparata della lingua Albanese" (1864-7); Dozon: "Manuel de la Langue Chkipe ou albanaise" (1878).

[5] Fick: "Die ehemalige Spracheinheit Europa's" (1873).

[6] Georg Curtius: "Grundzüge der griechischen Etymologie" (1858, 4th edit. 1874, English translation by Wilkins and England), and "Das Verbum der griechischen Sprache" (1873-6); Leo Meyer: "Vergleichende Grammatik der griechischen und lateinischen Sprache" (1861-5); Kühner: "Ausführliche Grammatik der griechischen Sprache" (1869-72).

[7] Mullach: "Grammatik der griechischen Vulgärsprache" (1856).

(η). Letto-Slavonic: (1) Slavic:[1] † Old Slavonic (Church Slavonic);[2] Bulgarian; Russian; Servian; Slovene; Slovak; Polish; Polabic (Cassubian); † Wend; (2) Lettic: † Old Prussian;[3] Lithuanian;[4] Lett.[5]

(θ). Teutonic Group: (1) † Gothic;[6] Low German (Old, Middle, and New); † Anglo-Saxon;[7] English; Frisian; Dutch; (2) High German (Old, Middle, and New);[8] (3) † Old Norse;[9] Icelandic;[10] Swedish; Danish; Norwegian.

XIX. † Etruscan (agglutinative).[11]

[1] Miklosich: "Vergleichende Grammatik der Slavischen Sprachen" (1852-76), and "Altslovenische Formenlehre" (1874).

[2] Schleicher: "Die Formenlehre der kirchenslawischen Sprache" (1852); Chodzko: "Grammaire paléo-slave" (1869); Leskien: "Handbuch der altbulgarischen Sprache" (1871).

[3] Pauli: "Preussische Studien," in Kuhn's "Beiträge," vi. and vii.

[4] Schleicher: "Handbuch der litauischen Sprache" (1856-7).

[5] Bielenstein: "Die lettische Sprache nach ihren Lauten und Formen" (1863-4), and "Handbuch der lettischen Sprache" (1863).

[6] Leo Meyer: "Die gothische Sprache" (1869); Stamm: "Ulphilas" (4th edit. by Heyne, 1869); Holtzmann: "Altdeutsche Grammatik, umfassend die gotische, altnordische, altsächsische, angelsächsische und althochdeutsche Sprachen" (1870); Helfenstein: "A Comparative Grammar of the Teutonic Languages" (1870); "Zeitschrift für deutsche Philologie," since 1869; "Archiv für die Geschichte der deutschen Sprache und Dichtung," since 1873.

[7] March: "A Comparative Grammar of the Anglo-Saxon Language" (1870); Sweet: "An Anglo-Saxon Reader" (1876).

[8] Schleicher: "Die deutsche Sprache" (3rd edit. 1874); Weinhold: "Grammatik der deutschen Mundarten" (1863-67); Scherer: "Zur Geschichte der deutschen Sprache" (2nd edit. 1878).

[9] Wimmer: "Oldnordisk formlaere til Brug ved Undewisnung og Selvstudium" (1870); (translated by Sievers: "Altnordische Grammatik," 1871).

[10] Cleaseby-Vigfusson: "An Icelandic-English Dictionary, chiefly founded on the Collections made from prose-works of the Twelfth to the Fourteenth Centuries" (1869-76).

[11] Deecke: "Corssen und die Sprache der Etrusker" (1875), and

XX. Basque (Eskuara), (incorporating).[1]

XXI. Turanian or Ural-Altaic (Ugro-Altaic) (agglutinative) :[2]—

(1). † West-Asia Group :—

(α). † Accadian or Sumerian.[3]

(β). † Susianian, † Kossæan : † Protomedic.[4]

(2). Uralic Group :[5]—

(α). Tchudic :—(α). Finnish or Suomi,[6] Vêpse or Old Tchude,[7] Vote,[8] Karelian : Estho-

[1] Etruskische Forschungen," 3 pts. (1876-79); K. O. Müller: "Die Etrusker," ed. by Deecke (1875-7).

[1] Prince L-L. Bonaparte : "Le Verbe basque en tableaux, accompagné de notes grammaticales, selon les huit dialectes de l'Enskara" (1869); Van Eys : "Essai de Grammaire de la Langue basque," 2nd edit. (1867), and particularly "Grammaire comparée des Dialectes basques" (1879); "Ribáry: "Essai sur la Langue basque," translated with notes, &c., by Vinson (1877).

[2] Max Müller on the "Last Results of the Turanian Researches," in Bunsen's "Outlines of the Philosophy of Universal History," vol. i. pp. 263-520.

[3] Sayce : in the "Journal of Philology," iii. 5 (1870), and the "Transactions of the Philological Society," pt. 1 (1877) ("Accadian Phonology"); Fr. Lenormant: "Études accadiennes" (1873), and "La Langue primitive de la Chaldée" (1875).

[4] Sayce: in the "Transactions of the Society of Biblical Archæology," iii. 2 (1874) ("The Languages of the Cuneiform Inscriptions of Elam and Media").

[5] Boller: "Die finnischen Sprachen" in the "Berichte der k. Akad. zu Wien," x. 1 (1853); Thomsen: "Ueber den Einfluss der germanischen Sprachen auf die finnischen-lappischen (1870); Weske: "Untersuchungen zur vergleichenden Grammatik des finnischen Sprachstammes" (1873); De Ujfalvy, in the "Revue de Philologie et d'Ethnographie," i. 1, 2 (1874-5).

[6] Eurèn : "Finsk Spraklära" (1869); Strahlmann : "Finnische Sprachlehre" (1816); Kellgrèn: "Die Grundzüge der finnischen Sprachen mit Rücksicht auf die andern altaischen Sprachen" (1847).

[7] Lönnrot: "Om det nord-tschudiska Spraket" (1863).

[8] Ahlqvist: "Wotisk Grammatik," in the "Transactions of the Finnish Society," v. (1855).

nian,[1] Krevingian: Livonian,[2] † Dialect of Salis. (*b*). Lapp.[3]

(β). Permian:—(*a*). Permian, Zyrianian.[4] (*b*). Votiak.[5]

(γ). Volgaic:—(*a*). Tcheremiss:[6] (*b*). Mordvin (Ersa and Moksha).[7]

(δ). Uigur:—(*a*). Magyàr.[8] (*b*). Vogul.[9] (*c*). (Oloi) Ostiak.[10]

(3). Samoied Group:[11]—Yurak: Tawgy: Ostiak-Samoied: Yenissei-Samoied: Kamassin.

[1] Ahrens: "Grammatik der esthnischen Sprache revalschen Dialektes" (1853); Wiedemann: "Versuch ueber den werro-esthnischen Dialekt" in the "Mémoires de l'Académie des Sciences de St. Pétersbourg," vii. (1864); Hupel: "Ehsthnische Sprachlehre" (1780).

[2] Sjögrén: "Livische Grammatik" (1861).

[3] Ganander: "Grammatica Lapponica" (1743); Friis: "Lappisk Grammatik" (1856); Lönnrot: "Ueber den Enare-Lappischen Dialekt," in the "Actes de la Société scientifique finnoise," iv. (1854); Budenz (Bezzenberger's "Beiträge," iv. 1878) dissociates Lapp from Finn, and classifies the Ugrian group as follows:—(1). North-Ugrian: Lapp, Wotiak and Zyrianian, Magyar, Wogul and Ostiak. (2). South-Ugrian: Tcheremiss, Mordvin, Finnish.

[4] Castrén: "Elementa grammatices Syrjænæ" (1844); Wiedemann: "Versuch einer Grammatik der Syrjanischen Sprache" (1847).

[5] Wiedemann: "Grammatik der votjakischen Sprache" (1851).

[6] Castrén: "Elementa grammatices Tscheremissæ" (1845); Wiedemann: "Versuch einer Grammatik der tscheremissischen Sprache" (1847).

[7] Wiedemann: "Grammatik der Ersa-mordvinischen Sprache" (1865); Ahlgvist: "Versuch einer Mokscha-mordvinischen Grammatik" (1861).

[8] Riedl: "Magyarische Grammatik" (1858); Fauvin: "Essai de Grammaire hongroise" (1870).

[9] Hunfálvy: "Kondai vogul nyelv" (1872).

[10] Castrén: "Versuch einer ostjakischen Sprachlehre" (1849), edited by Schiefner (1858).

[11] Castrén: Grammatik der Samojedischen Sprachen," edited by Schiefner (1854).

(4). Turkish-Tatar Group :[1]—

(α). Yakute.[2]

(β). Uigur :[3] Komanian : Tchagatai :[4] Türkoman : Usbek : Kazan.

(γ). Nogai : Kumük : Bashkir : Kirgish : Tshuwash :[5] Karachai : Karakalpak : Meschcheryak.

(δ). West Turkish (of Durbend, Aderbijan, Krimea, Anatolia and Rumelia = Osmanli).[6]

(5). Mongol :—

(α). East Mongol (Sharra, Ḳ̣halkha, Sharaigol).[7]

(β). Kalmuk (Shoshot or Kokonur, Dsungur, Torgod, Dürbek, Aimak).[8]

(γ). Buriat.[9]

(6). Tungusian :—

(α). Tunguse (Chapogire, Orotong, Nyertchinsk).[10]

(β). Mantchu (and Lamute and Yakutsk).[11]

[1] Schott: "Altajische Studien" (1867-72).

[2] Böhtlingk: "Ueber die Sprache der Jakuten" (1851).

[3] Vambéry: "Uigurische Sprachmonumente" (1870).

[4] Vambéry: "Chagataische Sprachstudien" (1867).

[5] Schott: "De lingua Tschuwaschorum dissertatio" (Berlin).—See Radloff: "Die Sprachen der türkischen stämme Süd-Siberiens: die Dialekte der Altajer u. Teleuten, Lebed-Tataren, Schoren und Sojonen" (1866).

[6] Kasem-Beg: "Allgemeine Grammatik der Türkisch-tatarischen Sprache," translated by Zenker (1848); Barker: "Reading-book of the Turkish Language, with Grammar and Vocabulary" (1854); Redhouse: "Grammaire de la Langue ottomane" (1846).

[7] Schmidt: "Grammatik der mongolischen Sprache" (1831).

[8] Zwick: "Grammatik der westmongolischen Sprache" (1851).

[9] Castrén: "Versuch einer bürjatischen Sprachlehre" (1857).

[10] Castrén: "Grundzüge einer tungusischen Sprachlehre" (1856).

[11] Adam: "Grammaire de la Langue mandchou" (1873); Von der Gabelentz: "Élémens de la Grammaire mandchou" (1833).

? Japanese and Loo-choo.[1]

XXII. Dravidian[2] (agglutinative):—Tamil:[3] Telugu:[4] Tulu:[5] Canarese:[6] Malayâlam:[7] Toda:[8] Kudagu or Coorg:[9] Khond or Ku: Badaga: Kṛota: Uraon or Dhangar: Rajmuhâli or Mâler: Gond.[10]

Elu (Siṅghalese),[11] though ordinarily placed here, is rather an Aryan language. [See under XVIII. (α).]

XXIII. Kolarian (agglutinative):—Santhal:[12] Mundâri[13] (Bhomij; Ho or Kole): Kharia: Juang: Korwa: Kur and Kurku: Savara: Mehto.

[1] Hoffmann: "A Japanese Grammar," 2nd edit. (1876); de Rosny: "Premiers Élémens de la Grammaire japonaise (langue vulgaire)" (1873); Hall: "Voyage of Discovery to West Coast of Corea and the Great Loo-choo Island, with a Vocabulary of the Loo-Choo Language by Clifford" (1818).

[2] Caldwell: "A Comparative Grammar of the Dravidian or South-Indian family of Languages" (2nd edit. 1876).

[3] Graul: "Outlines of Tamil Grammar" (1855).

[4] Brown: "A Grammar of the Telugu Language" (2nd edit. 1857).

[5] Brigel: "A Grammar of the Tulu Language" (1872).

[6] Hodgson: "An Elementary Grammar of the Kannada or Canarese Language" (2nd edit. 1864).

[7] Peet: "A Grammar of the Malayalim Language" (1841).

[8] Pope: "A brief Outline of the Grammar of the Toda Language" in Marshall's "Phrenologist among the Todas" (1873, p. 241).

[9] Cole: "An Elementary Grammar of the Coorg Language" (1867).

[10] Driberg and Harrison: "Narrative of a Second Visit to the Gonds of the Nerbudda Territory, with a Grammar and Vocabulary of their Language" (1849).

[11] De Alwis: "The Sidath Sangarawa, a Grammar of the Singhalese Language" (1852); Chater: "A Grammar of the Singhalese Language" (1815).

[12] Skrefsrud: "A Grammar of the Santhal Language" (1873).

[13] Brandreth in the "Journal of the Royal Asiatic Society," x. 1 (1877), pp. 7, 8.

XXIV. Tibeto-Burman[1] (isolating):—

(1). Nepaul Group:—Sunwar: Gurung and Murmi: Magar:[2] Kusunda: Chepang: Pahri: Newar: Bhramu: Kiranti: Vâyu:[3] Limbu.

(2). Sikhim:—Lepcha.[4]

(3). Assam Group:—Dhimal:[5] Kachâri or Bodo:[5] Aka: Deoria-Chutia: Dophla: Miri: Abor: Mishmi: Singpho or Kakhyen: Naga: Mikir: Garo:[6] Pani-Koch (?).[6]

(4). Mûnipur-Chittagong Group:—Munipûri: Liyang or Koreng: Maring: Maram: Kapui: Tangkhul: Luhupa: Tipura or Mrung: Kuki: Lushai: Shendu: Banjogi: Sak: Kyau.

(5). Burma Group:—Burmese (Mugh or Rakheng):[7] Khyen: Kumi: Mru: Karén:[8] Kui: Kho: Mu-tse.

(6). Trans-Himalayan Group:—Gyarung: Changlo: Thochu: Manyak: Takpa: Horpa: Kunâwari: Tibetan or Bhotiya[9] (Sarpa: Llopaor Bhutâni).

(7). China Group:—Lolu: Mautse: Lisaw.

[1] Brandreth: *l. c.* pp. 9-25.

[2] Beames: "The Magar Language of Nepaul" (1869); Hodgson: "Essays on the Languages, Literature, and Religion of Nepál and Tibet" (1874).

[3] Hodgson: "Grammar of the Vaya Language" (1857).

[4] See "Journal of the Asiatic Society of Bengal," vol. ix.

[5] Hodgson: "On the Koçch, Bodo, and Dhimal Tribes, including Vocabulary, Grammar, &c." (1847).

[6] See Robinson: "Assam" (1841).

[7] Judson: "Grammar of the Burmese Language" (1866); Chase: "Anglo-Burmese Handbook" (1852); Latter: "Burmese Grammar" (1845).

[8] Wade: "Grammar of the Karen Language" (1861).

[9] Csoma de Körös: "Grammar of the Tibetan Language" (1834); Schmidt: "Grammatik der tibetischen Sprache" (1839);

XXV. Thai or Tai[1] (isolating):—Siamese or Thai:[2] Lao:[3] Shan: Ahom: Khamti: Aiton: Tai-Mow or Miau-tsi dialects (China).[4]

XXVI. Mon-Anam[5] (isolating):—Mon, or Talâin, or Peguan:[6] Kambojan:[7] Annamite or Cochin-Chinese:[8] Paloung: dialects of the tribes beyond the river Mekong.

XXVII. Khasi[9] (isolating):—Khasi, Synteng, Batoa, Amwee, Lakadong.

XXVIII. Chinese[10] (isolating):—Amoy,[11] Cantonese or Kong, Foochow, Punti, Shanghai,[12] Mandarin.[13]

XXIX. Corean:[14] (?) Gilyak.

XXX. † Lycian[15] (inflectional).

Jaeschke: "A short practical Grammar of the Tibetan Language" (1865); Foucaux: "Grammaire de la Langue tibétaine" (1859).

[1] Brandreth: *l. c.* pp. 27, 28.

[2] Pallegoix: "Grammatica linguæ Thai" (1850).

[3] See "Journal of the Asiatic Soc. of Bengal" (1837).

[4] Edkins: "The Miau-tsi Tribes" (1870).

[5] Brandreth: *l. c.* pp. 28-30.

[6] Haswell: "Peguan Grammar" (1876).

[7] Janneau: "Manuel pratique de la Langue cambodienne" (very rare).

[8] Aubaret: "Grammaire de la Langue annamite" (1864).

[9] Brandreth: *l. c.* pp. 25-27; Schott: "Die Cassia-Sprache," in the "Abhandlungen der k. Akad. der Wissensch. in Berlin" (1859). These groups from XXII. to XXVII. with their literature are treated by Cust: "The Modern Languages of the East Indies" (1878).

[10] Endlicher: "Anfangsgründe der Chinesischen Grammatik" (1845); Schott: "Chinesische Sprachlehre" (1857); Stanislas Julien: "Syntaxe nouvelle de la Langue chinoise" (1869); Edkins: "Introduction to the Study of the Chinese Characters" (1876).

[11] Macgowan: "Manual of the Amoy Dialect" (1869).

[12] Edkins: "Grammar of the Shanghai Dialect" (1868).

[13] Edkins: "Grammar of the Mandarin Dialect" (2nd edit. 1864).

[14] De Rosny: "Aperçu de la langue coréenne" (1864).

[15] Moriz Schmidt: "The Lycian Inscriptions after the accurate copies of Aug. Schönborn" (1869).

XXXI. Lesghic (inflectional): — Lesghian : Avar :[1] Andi : Dido : Kasikumük : Akush : (?) Kyra.

XXXII. Ude[2] (agglutinative).

XXXIII. Circassian (prefix-agglutinative and incorporating):—Abkhas or Absné : Cherkess :[3] Bzyb : Adigé.

XXXIV. Thushian (inflectional): — Thush :[4] Chetchenz,[4] or Kistic, or Mizhdzedzhi : Arshte or Aristoiai : Ingush or Lamur.

XXXV. Alarodian (inflectional):—† Vannic,[5] Georgian :[6] Lazian :[7] Mingrelian :[7] Suanian.[7]

XXXVI. Malayo-Polynesian (agglutinative):[8]—

(1). Malayan Group :—

(*a*). Philippine dialects (Tagâla, Zebuana, Bisaya, Pampanga, Ilocana, Bicol):[9] Mariana (La-

[1] Schiefner: "Versuch über das Avarische," in the "Mémoires de l'Académie des Sciences de St. Pétersbourg," v. 8 (1862).

[2] Schiefner: "Versuch über der Uden," in the "Mémoires de l'Académie des Sciences de St. Pétersbourg," vi. 8 (1863); Fr. Lenormant: "La Langue primitive de la Chaldée," pp. 424-5.

[3] Schiefner: "Bericht über des Generals Baron Peter von Uslar abchasische Studien," in the "Mémoires de l'Académie de St. Pétersbourg," vi. 12 (1863); Rosen: "Ossetische Sprachlehre nebst einer Abhandlung über das Mingrelische, Suanische und Abchasische," in "Abhandl. Berlin. Akad. (1845).

[4] Schiefner: "Versuch über die Thush-Sprache," in the "Mém. etc." vi. 9 (1856), and "Tchetschenzische Studien," in the "Mémoires," vii. 5 (1864).

[5] Schulz in the "Journal Asiatique," 3rd ser. ix. (1828); Fr. Lenormant: "Lettres Assyriologiques," i. 2 (1871); Sayce, in Kuhn's "Zeitschrift," xxiii. 4 (1877).

[6] Brosset: "Eléments de la Langue georgienne" (1837).

[7] Rosen: "Sprache der Lazen" (1847), in the "Abhandlungen der Berlin. Akademie." See also his "Ossetische Sprachlehre" (1845).

[8] Friedrich Müller: "Reise der oesterr. Fregatte Novara um die Erde: Linguistischer Theil" (1867), pp. 267, *sq.*

[9] Totanes: "Arte de la Lengua Tagala," 3rd edit. (1850); Mentrida: "Arte de la Lengua Bisaya Hiliguayna" (1818); Bergaño:

drone) Islands dialects: Molucca Islands: Timur Islands (Bima, Endeh, Solor and Allor, Sumba, Timurese, Teto, Kissa, Savoe, Rotti): Malagasi:[1] Formosa dialects.[2]

(β). Malayo-Javanese (Malay,[3] Achinese, Batak, Rejang, Lampong, Javan or †Kawi,[4] Sunda,[5] Madurese,[6] Balinese,[7] Sassak, Bugis, Bouton, Makassar,[8] Alfurian,[9] Dayak [Borneo],[10] Kyan).

"Arte de la Lengua Pampaga," 2nd edit. (1736); Lopez: "Compendio y Methodo de la Suma de las Reglas del Arte Ydioma Ylocano" (1792); "Arte de Langua Zebuana" (616 pp. undated; very rare); Fausto de Cuevas: "Arte nuevo de la Lengua Ybanag" (1826); San Augustin: "Arte de la Langua Bicol" (1795).

[1] Kessler: "An Introduction to the Language and Literature of Madagascar" (1870); Dalmond: "Vocabulaire et Grammaire pour les Langues Malgaches, Sakalave, et Betsimitsara" (1842). See Cousins, in the "Transactions of the Philological Society," pt. 2 (1878).

[2] H. C. von der Gabelentz in the "Z. D. M. G." xiii. (1859); Happart: "Dictionary of the Favorlang Dialect of the Formosan Language written in 1650," translated by W. Medhurst (1840).

[3] De Hollander: "Handleiding bij de beoefening der Maleische taal-en letterkunde" (1856); Marsden: "A Grammar of the Malayan Language" (1812).—Van der Tuuk: "Bataksch Leesboek bevattende stukken in het Tobasch, Mandailingsch en Dairisch" (1860-2), and "Kurzer Abriss einer Batta'schen Formenlehre in Toba-dialekte," translated by Schreiber (1867).

[4] De Hollander: "Handleiding bij de beoefening der Javansche taal-en letterkunde" (1848); Wilhelm von Humboldt: "Ueber die Kawi-Sprache auf der Insel Java" (1836-9).

[5] Coolsma: "Handleiding bij de beoefening der Soendaneesche taal" (1873).

[6] Vreede: "Handleiding tot de beoefening der Madoeresche taal" (1874).

[7] Van Eck: "Beknopte Handleiding bij de beoefening van de Balineesche taal" (1874).

[8] Matthes: "Makassaarsche Sprackkunst" (1858).

[9] Niemann: "Bijdragen tot de kennis der Alfoersche taal in de Minahasa" (1866).

[10] Hardeland: "Versuch einer Grammatik der Dajackschen

(2). Polynesian Group:[1]—Samoan:[2] Tongan:[3] Maori[4] [New Zealand]: Tahitian:[5] Rarotongan:[6] Hawaiian:[7] Marquesan:[8] Easter Is-

Sprache" (1858); H. C. von der Gabelentz: "Grammatik der Dajak-Sprache" (1852).

[1] Mr. Whitmee is preparing a "Comparative Dictionary and Grammar of the Polynesian Languages," to be published by Messrs. Trübner and Co., of which the "Samoan Grammar" by Mr. Pratt (2nd edit.) has already appeared. See also "United States Exploring Expedition during the years 1838-42: Ethnography and Philology," vol. vii. by Hor. Hale.

[2] Pratt: *l. c.* (1st edit. 1862, 2nd edit. 1878).

[3] West: "Ten years in South-Central Polynesia" (Grammar in App.) (1865).

[4] Maunsell: "Grammar of the New Zealand Language," 2nd edit. (1862); Kendall: "A Grammar and Vocabulary of the Language of New Zealand" (1820).

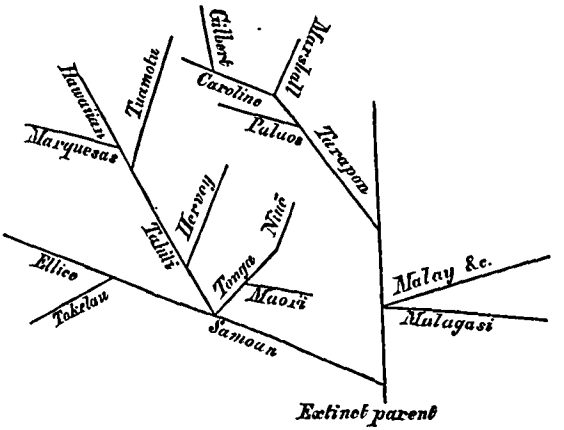
[5] Davies: "A Grammar of the Tahitian Dialect of the Polynesian Language" (1823); Gaussin: "Du Dialecte de Tahiti, de celui des Iles marquises et en général de la Langue polynésienne" (1853).

[6] Buzacott: "Grammar of the Rarotongan Language" (1854).

[7] Andrews: "Hawaiian Grammar" (1836); Alexander: "A short Synopsis of the most essential points in Hawaiian Grammar" (1864).

[8] Buschmann: "Aperçu de la Langue des Iles marquises" (1843).

Mr. Whitmee makes the Polynesian linguistic stem as follows:—



land: Gambier Islands: Niuē: Tokelau: Ellice Islands: Uvea.

XXXVII. Melanesian (agglutinative):—Dialects of Viti or Fiji, Annatom, Erromango, Tana, Mallicolo, Lifu, Baladea, Bauro, Gera or Guadalcanar, Mota, Dauru, Faté, Api, Pama, Ambryn, Vunmarama, Yehen or Yengen, Ulaua, Mara Ma-siki, Anudha, Mahaga, &c. (New Caledonia, New Hebrides, New Britain, Loyalty, Solomon's, and Admiralty Islands).[1]

XXXVIII. Papuan (agglutinative):—

(α). Papuan of New Guinea.[2]

(β). Negrito dialects of the Philippines and Semang.

(γ). (?) Dialects of the Mincopies or Andamanners.[3]

XXXIX. Anio of Japan,[4] and Kamchadal.

[1] See H. C. von der Gabelentz: "Die melanesischen Sprachen nach ihrem grammatischen Bau und ihrer Verwandtschaft unter sich und mit den malaiisch-polynesischen Sprachen," in the "Abhandl. der k. Sächsischen Gesellschaft der Wissenschaften," vii. and xvii. (pt. 1, 1860; pt. 2, 1873); Hazlewood: "Grammar and Dictionary of the Fiji Language" (Bau dialect), 2nd edit., edited by Calvert (undated).—Codrington: "A Sketch of Mota Grammar" (Bank's Islands) (1877); Moseley on the Admiralty Islanders in the "Journal of the Anthropological Institute," May, 1877.

[2] A. B. Meyer: "Ueber die Mafoor'sche und einige andere Papua-Sprachen auf New-Guinea," in the "Sitzungsberichte der k. Akademie der Wissenschaften in Wien," lxxvii. (1874), pp. 299, *sq.*; Grey and Bleek: "Handbook of African, Australian, and Polynesian Philology" (1858-62), vol. ii.; Earl: "The Native Races of the Indian Archipelago: Papuans" (1853).

[3] Roepstorff: "Vocabulary of Dialects spoken in the Nicobar and Andaman Islands" (1874).

[4] See Pfitzmaier: "Ueber den Bau der Aino Sprache," in the "Sitzungsberichte der k. Akademie d. Wissensch. in Wien," vii. (1851), pp. 382, *sq.* (published 1852), and "Kritische Durchsicht von Davidson's Wörtersammlung der Ainós" (1852).

XL. Australian (agglutinative) :—Kamilaroi,[1] &c., &c. Possibly also the † four dialects of Tasmania.[2]

XLI. Unclassified South American languages (polysynthetic) :—Peschêrêh or Fuegian[3] (divided into Alikulip and Tekeenika) : Patagonian or Tehuelhet :[4] Puelche or Querandi (Argentine Republic and Pampas) :[5] Charrua : † Chibcha (language of the Muisca or Moska in New Granada) :[6] † Yaro and Guenoa : † Bo-

[1] Threlkeld: "An Australian Grammar, comprehending the principles and natural rules of the Language, as spoken by the Aborigines in the vicinity of Hunter's River, Lake Macquarie, &c., New South Wales" (1834); Ridley: "Kamilaróì and other Australian Languages," 2nd edit. (1875); Friedrich Müller: "Reise der oesterr. Fregatte Novara," iii. (1867); Hale in "U. S. Exploring Expedition, &c." pp. 479-531; Teichelmann and Schuermann: "Outlines of a Grammar, Vocabulary, and Phraseology of the Aboriginal Languages of South Australia" (1840); "Australian Languages and Traditions," in the "Journal of the Anthropological Institute," Feb. 1878.

[2] Milligan: "On the Dialects and Language of the Aboriginal Tribes of Tasmania," in the "Papers and Proceedings of the Royal Society of Tasmania," iii. 2 (1859); see also Lhotsky in the "Journal of the Royal Geographical Society," 1839, pp. 157-162.

[3] See D'Orbigny: "L'Homme américain," i. pp. 412, *sq.*; Hervas: "Catalogo delle lingue conosciute" (1784), p. 15; Laet: "Orbis novus s. descriptionis Indiæ occidentalis libri xviii." (1633), pp. 511, 516-18, 520. [The Peshêrêh or Pesherai Indians are also called Yakanaku, and are divided into the three tribes Kamentes, Karaikas, and Kennekas.] For a list and literature of the American languages, see the exhaustive "Literature of American Aboriginal Languages," by H. E. Ludewig, edited by N. Trübner (1858).

[4] Hale: "United States Exploring Expedition: Ethnography and Philology," pp. 656, *sq.* (1846); Muster: "Patagonians" (1871).

[5] Hale: pp. 653, *sq.* [The Puelches are divided into Chechehet, Divihet, and Taluhet.]

[6] Uricoechea: "Grammatica, vocabulario, catecismo i confesionario de la Lengua Chibcha" (1871); Bern. de Lugo: "Gramatica en la Lengua general del nuevo reyno llamada Mosca" (1619).

hené: † Chana: Minuane: Kasigua: 51 languages of Brazil (Adelung's "Mithridates," iii. 1. pp. 461–469): † Payagua: † Lengua: † Enimaga: † Yakurure: Machikuy: Mataguaya: Malhalae: Pitilaga: Toba: Yarura: Ele and Betoi.[1]

XLII. Guaycuru-Abiponian[2] (polysynthetic):—(Guaycuru spoken between the Paraguay and the Pilcomayo, Abiponian in the valley of the Salado):[3] Mokobi:[3] Mbaya:[3] (?) Aquiteguedichaga: (?) Grato: (?) Ninaquiguila: (?) Guana (Adelung's "Mithridates," iii. 1. pp. 473-477).

XLIII. † Arda:[4] Andoa: Shimigac (polysynthetic).[4]

XLIV. Araucanian or Moluch of Chili[5] (polysynthetic):—Picunche: Pehuenche: Huilliche.

XLV. Peruvian[6] (polysynthetic):—Quichua:[7] Ay-

[1] For Yarura and Betoi Grammar see Adelung: "Mithridates," iii. 1, pp. 635-47.

[2] Dobrizhoffer: "Historia de Abiponibus" (1784); grammars in Adelung: "Mithridates," iii. 1, pp. 498-506.

[3] Mbaya Grammar in Adelung: "Mithridates" (1812), iii. 1, pp. 482-488.

[4] According to Alcedo spoken on the Upper Napo. A "Doctrina Christiana" (Madrid, 1658) and a "Paternoster" are the only specimens left of it. For the Andoa and 17 other possibly connected languages see Adelung: "Mithridates," iii. 1, pp. 583-597.

[5] Havestadt: "Chilidugu, sive res Chilenses" (with grammar and dictionary), (1777); Febrès: "Arte de la Lengua general del Reyno del Chilé" (1765; 2nd edit. 1846); De Valdivia: "Arte Grammatica, Vocabulario en la Lengua de Chile" (1608); Adelung: "Mithridates," (1812), iii. 1, pp. 404-416.

[6] Lopez: "Les Races Aryennes de Pérou" (1872). [Unscientific].

[7] Von Tschudi: "Die Kechua-Sprache" (1853); Markham: "Quichua Grammar" (1864); Domingo de S. Thomas: "Arte y Vocabulario en la Lengua general del Peru llamada Quichua" (1586).

mara:[1] Juracares: Mayoruna: Calchaqui: Atacama: Changos: Conibos:[2] (?) Mochika (Puquina, and Yunka; see Adelung's "Mithridates," iii. 1. pp. 548-551).

XLVI. Andes-languages, or Maipurian (isolating):—

(α). Moxa:[3] Chiquita:[3] Zamuca:[3] Panos: Maipur:[4] Pacaguayra.

(β). Barré or Pareni:[5] Baniwa: Tariana: Chimanoo: Tikuna: Uainamben or Mauhe: Juri.

(γ). (?) Salivi.[6]

XLVII. Tupi-Guarani[7] (polysynthetic):—

(1). North Guarani or Tupi:—Tupinaba: Tupininquin: Tuppinamba.

(2). Chiriguano and Guarayi (West Guarani).

(3). South Guarani.

(4). Omagua.[8]

XLVIII. Carib[9] (polysynthetic):—Carib:[10] Arawak:[11]

[1] Bertonio: "Arte breve de la Lengua Aymara" (1603-12); Mossbach: "Die Inkas-Indianer und das Aymara" (1874).

[2] See "Bulletin de la Société Géographique de Paris," 1853.

[3] Marban: "Arte de la Lengua Moxa" (1701); Chiquita and Zamuca Grammars in Adelung: "Mithridates," iii. 1. pp. 553-563.

[4] For grammar see Adelung: "Mithridates," iii. 1, pp. 619-23.

[5] Wallace: "Travels on the Amazon" (1853).

[6] For grammatical notes see Adelung: "Mithridates," iii. 1, pp. 624-627.

[7] Platzmann: "Grammatik der brasilianischen Sprachen" (1874); De Montoya: "Arte y Vocabulario de la Lengua Guarani" (1640); Adelung: "Mithridates," pp. 432-460; De Anchieta: "Arte de Grammatica da Lingoa mais usada na costa do Brasil" (1595).

[8] For grammar see Adelung: "Mithridates," iii. 1, pp. 606-10.

[9] Vocabulary in Davies: "History of the Carriby Islands" (1666); Raymond Breton: "Grammaire de la Langue caraïbe" (1668).

[10] "Dictionnaire Galibi, précédée d'un essai de Grammaire," par "M. D. L. S." (1763); Grammar in Adelung: "Mithridates," iii. 1, pp. 685-696.

[11] Quandt: "Arowakische Grammatik," in Schomburgk: "Reisen

Chayma : Guarauna : Tamanaque :[1] Cumana : Cumanagota.

XLIX. Lule[2] (in La Plata) (polysynthetic) :—Isiftene, Tokistine, Oristine, Tonocote : Vilela :[3] (?) Chumipy (in Chaco).

L. Cueva (isolating) :—Guanuca or Cocamua in Popayan : Tule : Cunacuna : Cholo : Uraba in Darien : Guaimie or Huaimie in Veraguas.[4]

LI. † Cibuney dialects of the Antilles[5] (isolating) :— (?) The Mosquito languages :[6] (?) Nagranda or Orotiña :[7] (?) Chorotega : (?) Chontal : (?) Coribici.

LII. Maya (polysynthetic) : — Maya :[8] Huasteca :[9]

in Britisch-Guyana" (1840-48); Brinton : "The Arawak Language of Guiana," in "Trans. American Phil. Society" (Philadelphia, New Ser. xiv. pp. 427, *sq.*).

[1] Grammar in Adelung: "Mithridates," iii. 1, pp. 656-66.

[2] Machoni: "Arte de la Lengua Lule" (1732); Grammar in Adelung: "Mithridates," iii. 1, pp. 510-516.

[3] Hervas: "Catalogo delle Lingue" (pp. 69-72); Bancroft: "Native Races of the Pacific," iii. pp. 793-95 (1875).

[4] See Adelung : "Mithridates," iii. 2, pp. 3, 4 ; De Rochefort: "Histoire naturelle et morale des Iles antilles," ii. ch. 10 (1665).

[5] Grammar in Bancroft: "Native Races," iii. pp. 784-790.

[6] Grammar in Bancroft: "Native Races," iii. pp. 791-793.

[7] Beltran: "Arte del Idioma Maya," 2nd edit. (1859); Gallatin in the "Trans. of the American Ethnological Society," i. pp. 252, *sq.*; Pimentel: "Cuadro descriptivo y comparativo de las lenguas indigenas de Mexico" (1862), ii. 1; Ruz: "Silabario de Maya" (1845); Squier: "States of Central America" (1858); Brasseur de Bourbourg: "Dictionnaire, Grammaire et Chrestomathie de la Langue Maya" (1872); De Rosny: "L'interprétation des anciens Textes Maya" (1875).

[8] Gallatin: *l. c.* pp. 276, *sq.*; Pimentel: *l. c.* i. 3; De Olmos: "Grammatica" (1560); De Charencey: "Le Pronom personnel dans les Idiomes de la famille Tapochulane-Huaxtèque" (1868), and "Recherches sur les Lois phonétiques dans les Idiomes de la famille

Quiche :[6] Kachiquel :[1] Zutuhil :[2] Poconchi, or Pokomam :[3] Mame or Zaklohpakap.[3]

LIII. Mexican (polysynthetic) :—

(1). † Nahuatl :[4] Aztec :[5] Niquiran : Tlaskaltek.

(2). Sonorian :[6]—

(α). Cahita : Cora : Tepeguana : Tarahumara.

(β). 'Opata : Heve (or Endeve) ;[7] Tubar : Yaqui : Tejana : Ahome.

(γ). Pima, or Nevome :[8] Papago.

(δ). Kizh :[9] Netela :[9] Cahuillo:[10] Chemahuevi : Kechi.

Mame-Huaxtèque" (1872); Bancroft: *l. c.* iii. pp. 779-781; Brasseur de Bourbourg: "Grammaire de la Langue Quichée-espagnole-française, mise en parallèle avec ses deux Dialectes Çakchiquel et Tzutuhil" (1862), and "Popol Vuh, le livre sacré et les mythes de l'antiquité américaine, avec les livres héroïques et historiques des Quichés" (1861).

[1] Flores: "Arte de la Lengua Kakchiquel" (1753).

[2] Brasseur de Bourbourg: "Grammaire de la Langue Quichée" (1862).

[3] Larios: "Arte de la Lengua Mame" (1697); Gallatin: *l. c.* pp. 269, *sq.*; Adelung: Poconchi Grammar in Adelung: "Mithridates," iii. 2, pp. 6-13; Bancroft: *l. c.* iii. pp. 764-66.

[4] De Olmos: "Grammaire de la langue Nahuatl" (1547), edited with notes by Rémi Simeon (1875).

[5] Çarochi: "Arte de la Lengua Mexicana" (1645); De Arenas: "Guide de la Conversation en trois Langues, français, espagnol et mexicain" (1862); De Charencey: "Notice sur quelques familles de Langues du Mexique" (1878).

[6] Buschmann: "Die Sonorischen Sprachen," in the "Abhandlungen der k. Akademie der Wissensch. in Berlin" (1863, *et seq.*); Grammars in Bancroft: "Native Races," iii. ch. viii.

[7] Buckingham Smith: "Grammatical Sketch of the Heve Language" (1862); 'Opata grammar in Bancroft: *l. c.* iii. pp. 702-4.

[8] B. Smith: "Grammar of the Pima" (1862), in Shea's "Library of American Linguistics," v.

[9] Buschmann: "Die Sprachen Kizh und Netela" (1856).

[10] "Pacific R. Reports," vol. ii. (1855).

(ε). Shoshone, or Snake Indian or Maradiço dialects:[1] Bannack: Shoshokee: Comanche: Moqui: Utah: Pah-Utah or Paduca.

LIV. Isolating languages of Mexico [belonging probably to several different families]:—

Othomi or Hia-hiu.[2]

Totonak.[3]

Tarasca.[4]

Matlazinca or Pirinda.[5]

Mixtek[6] (Tepuzcolana, Yanguistlan, Cuixlahuac, Tlaxiaco, &c.): Chocho or Cholo.

Zapotek or Oajaca:[7] † Zacapulan: † Zacatek.

Mixe.

Mazahua.

Huave.

Chiapanek.[8]

Pame (with 3 dialects).

[1] "Trans. of American Ethnol. Soc." vol. ii.; Schoolcraft: "Indian Tribes," vols. ii. iv. (1851-5).

[2] Naxera: "De lingua Othomitorum dissertatio" (1835); Piccolomini: "Grammatica" (1841); "Élements de la Grammaire Othomi, traduits de l'espagnol" (Paris, 1863).

[3] Bonilla: "Arte de la Lengua Totonaca" (1742); Pimentel: *l. c.* i. pp. 221, *sq.*

[4] Basalenque: "Arte de la Lengua Tarasca" (1714); Pimentel: *l. c.* i. pp. 269, *sq.*; Bancroft: *l. c.* iii. pp. 744-46.

[5] Pinelo: "Epitome" (Madrid, 1737-8); Grammar in Bancroft: *l. c.* iii. pp. 747-8.

[6] De los Reyes: "Arte de la Lengua Mixteca" (1593); Bancroft: *l. c.* iii. pp. 749-53.

[7] Cueva: "Arte de la grammatica de la Lengua Zapoteca" (1607); Bancroft: *l. c.* iii. pp. 754-6.

[8] De Cepeda: "Arte de las Lenguas Chiapa, Zoque, Celdales, y Cinacanteca" (Mexico, 1560).

LV. Unclassified Pueblo dialects (isolating):—Zuñi:[1] Queres (and Kiwomi): Jemez: Tezuque: Tegue: Huraba dialects.

LVI. Yuma (polysynthetic):—Cuchan: Mahao: Hahwalco: Yampaio: Cocopah: Puemaja or Camoye: Mojave: Diegueño.[2]

LVII. Unclassified Californian languages (polysynthetic):—

(1). Cochimi dialects.
(2). Pericu dialects.[3]
(3). Guaicuri dialects.[4]
(4). Pomo dialects.[5]
(5). Meidu and Nesheeman.
(6). East Sacramento.
(7). West Sacramento.
(8). Runsien.[6]
(9). Eslene.
(10). Tatche.[7]
(11). San Miguel.
(12, 13, &c.). Yakon, Klamath, Euroc, &c.

LVIII. Selish (polysynthetic):[8]—

(1). Kaitlen: Billikūla (British Columbia).

[1] Vocabulary in "Pacific R. Report," vol. ii. (1855). See Bancroft: "Native Races," iii. pp. 682-3.

[2] See Bancroft: *l. c.* iii. pp. 684-5.

[3] Clavigero: "Storia della California," i. pp. 110, *sq.* (1789).

[4] Grammar in Bancroft: *l. c.* iii. pp. 688-90.

[5] Grammar of the Gallinomero dialect in Bancroft: *l. c.* iii. pp. 644-6.

[6] Grammar of the Mutsun dialect in Bancroft: *l. c.* iii. pp. 655-6.

[7] Tatché Grammar in Bancroft: *l. c.* iii. pp. 656-8.

[8] "Contributions to North American Ethnology, in "U. S.

(2). Nanaimūk: Kowitsin: Songhu: Soke (Vancouver's Island).

(3). Kowlitz: S'klallam: Tsihális: Kwainaūtl': Kwilleĥiūt.

(4). Niskwalli:—

(*a*). Skwanksnamish: Kwulsset (Skokomish.)

(*b*). S'hotlmamish: Skwai-aitl': Sahewamish: Stehtsasamish: Sawamish: Nū-seht-satl'.

(*c*). Niskwalli *proper:* Segwallitsū: Stailaku-mamish: Skwalliahmish.

(*d*.) Puyallupahmish: T'kwakwamish: S'homamish.

(*e*). Sukwamish: Samamish: Skopamish: St'kamish: Sk'tehlmish.

(*f*). Snohomish.

(*g*). Snokwalmū: Stoluts-whamish: Sk'tahle-jum: Skihwamish: Kwehtl'mamish.

(*h*). Yakama.[1]

(*i*). Skagit: Kihiallū: Towah-hah: Nu-kwat-samish: Smali-hū: Sakū-mehū: Skwonamish: Miskai-whū: Swinamish: Miseekwigweelis.

(*j*). Lummi: Samish: Nūk-sahk.

LIX. Chinūk or Tsinūk[2] (polysynthetic):—Clatsop: Clatlascon or Wasco: Wakaikam. Chinook jargon.[3]

Geographical and Geological Survey of the Rocky Mountain Region," i. (1877), pp. 241, *sq.*; Mengarini: "Grammatica linguæ Selicæ" (1861).

[1] Pandosy: "Grammar and Dictionary of the Yacama Language" (1862), in Shea's "Library," vol. vi.

[2] Grammatical Notes on the Watlala Dialect in Bancroft: "Native Races," iii. pp. 628-9.

[3] "Dictionary of the Chinook Jargon, to which is (*sic*) added numerous Conversations," 6th edit., published by S. J. M'Cormick, Portland, Oregon.

LX. Sahaptin or Nez-percées[1] (polysynthetic):—Taitinapan: ? T'likatat: ? Walla-walla.

LXI. Nūtka or Yucuatl[2] (polysynthetic):—Makah: Tlaoquatsh.

LXII. Appalachian (Florida) (polysynthetic):—Natchez:[3] Muskogee or Creek Indian: Choctaw:[4] Cherokee (Cheroki) or Chilake.[5]

LXIII. Pawnee (Pani) or Riccaree[6] (polysynthetic).

LXIV. Dakota (Dacotah), spoken by the Sioux or Issati (polysynthetic):[7] Iowa or Sac:[8] Winnebago: Osage.

LXV. Iroquois (polysynthetic):—Onondago:[9] Seneca: Oneida: Mohawk: Cayuga: Tuscarora: Nottoway.

[1] "Contributions to N. A. Ethnology" (1877); Bancroft: "Native Races," iii. pp. 621-5.

[2] Vocabulary in "American Ethnology," vol. ii.; grammatical notes in Bancroft: *l. c.* iii. 610-12.

[3] Brinton: "On the Language of the Natchez," in the "Proceedings of the American Philosophical Society," xiii. (5th Dec. 1873).

[4] Byington: "Grammar of the Choctaw Language" (1870), edited by Brinton.

[5] Jonathan Edwards: "Observations on the Language of the Muhhekaneew Indians," edited by Pickering (1823); "Cherokee Primer" (Park Hill, Arkansas, 2nd edit. 1846). For the native syllabary invented by Segwoya (George Guess) in 1820, see Faulmann: "Das Buch der Schrift" (1878), p. 12.

[6] See W. Matthews: "Ethnography and Philology of the Hidatsa Indians" (1877). [Classed with the Caddo of Texas by Latham.]

[7] Riggs: "Grammar and Dictionary of the Dacota Language" (Smithson. Inst.) (1851); H. C. von der Gabelentz: "Grammatik der Dakota-Sprache" (1852); Pond: "Dakota Reading-book," (1842).

[8] Hamilton and Irwin: "An Iowa Grammar, illustrating the principles of the language used by the Iowa, Otoe, and Missour Indians" (1848).

[9] Shea: "Dictionnaire Français-Onontaguè" (with grammar), in Shea's "Library of Amer. Linguistics," i. (1859).

LXVI. Algonquin [1] (polysynthetic) :—Cree : [2] Ottawa : Ojibway or Chippeway [3] (4 dialects) : † Mohican, or Mohegan, or Pequot : Micmac or Miramichi (including Acadian and Gaspesian) : [4] Shawnee : Blackfoot : Leni-Lenapé or Delaware : Abenaki : † Narragansets : [5] † Natick or Massachusetts. [6]

LXVII. Athapaskan or Tinneh [7] (polysynthetic) :—

(1). Athapaskan proper, or Chippewyan (dialects of the Hare, Dogrib, Yellow-knife, and Coppermine Indians) : Sarsee : Tacallie.

(2). Tinneh :—Qualhioqua : Owillapsh : Tlatskanai : Umkwa : Tūtūten : Hūpah.

(3). Apache : [8] Navajo : Lipanes.

[1] Fr. Müller: "Der grammatische Bau der Algonkinsprachen" (1867); Cf. Du Ponceau: "Mémoire sur le Système grammatical des Langues de quelques nations indiennes de l'Amérique" (1838), pp. 207, *sq.*

[2] Howse: "Grammar of the Cree Language" (1805). [For the native syllabary of the Crees and Tinnehs, see Faulmann: "Das Buch der Schrift," p. 11.]

[3] Schoolcraft: "Ethnological Researches concerning the Red Man of America," iv. pp. 385-396; Edwin James: "Chippeway First Lessons in spelling and reading" (undated); Baraga: "A Theoretical and Practical Grammar of the Otchipwe Language" (1850).

[4] Maillard: "Grammar of the Micmac Language" (1864).

[5] Roger Williams: "A Key to the Languages of America" (1643).

[6] John Eliot: "The Indian Grammar Begun," reprinted by Pickering, in Second Ser. of "Collections of the Mass. Hist. Soc." (1832), ix. pp. 223-312, and i.-liv.

[7] Buschmann: "Der athapaskische Sprachstamm" (1856), and "Ueber die Verwandtschaft der Kinai-Idiome mit dem grossen Athapaskischen Sprachstamme," in the "Monatsberichte d. k. Akad. d. Wissensch. in Berlin" (1854), pp. 231, *sq.* [The Tinnehs have a native syllabary.]

[8] Grammar in Bancroft: *l. c.* iii. pp. 596-601.

(4). Tinneh or Atnah dialects in Alaska :—3 Western : 7 Eastern : 10 Kutchin dialects (2 extinct).[1] [Tinneh or Atnah is called Kolshina by the Russians.]

LXVIII. T'linket[2] (polysynthetic) :—

(1). Yakūtat.

(2). Chilkāht-kwān : Sitkā-kwān : Stākhin-kwān.

(3). Kygāhni.

(4). Nass : Chimsyān.[3]

(5). Kolush.[4]

LXIX. Aleutian or Unŭngŭn[5] (polysynthetic) :—

(α). Eastern or Unalashkan.[6]

(β). Western or Atkan.

LXX. Eskimo (Esquimaux) or Innuit[7] (polysynthetic) :—

(1). Western Eskimo (N. W. America and North-East Asia) :—(a). West Mackenzie Innuit ; (b). Western Innuit : (c). Fishing Innuit : (d). South Eastern Innuit.[8]

[1] "Contributions to North American Ethnology," vol. i. pp. 24-40 (1877).

[2] "Contributions to N. A. Ethnol.," p. 40, pp. 111-114 (Grammar by G. Gibbs), pp. 121, *sq.*

[3] "Contrib.," &c. pp. 155-6.

[4] Buschmann : "Die Pima-Sprache und die Sprache der Koloschen" (1857).

[5] Wenjaminoff : "Opyt grammatiki Aleutsko-lisjevskago jazika" (S. Petersburg, 1846); "Contributions to North Amer. Ethnol.," pp. 22-24.

[6] Grammatical Notes in "Contributions," &c., pp. 115, 116.

[7] Kleinschmidt: "Grammatik der grönländischen Sprache" (1851).

[8] "Contributions to N. A. Ethnol." pp. 9-24 ; Grammatical Notes in Bancroft: "Native Races," iii. pp. 576-77; Veniaminoff: "Ueber die Sprachen der russischen Amer." in Erman's "Archiv," vii. i. pp. 126, *sq.*

(2). Eastern Eskimo or Greenlandish or Karali.

(3). Arctic Highlanders.

LXXI. American Chukchi.[1]

LXXII. Asiatic Chukchi and Koriak (agglutinative).[2]

LXXIII. Yukhagir or Andondommi (agglutinative).[3]

LXXIV. Yenissei-Ostiak and Kott (Khotowski) or Kanski (agglutinative).[4]

LXXV. Unclassified island-languages :—

(1). Mergui Archipelago languages.

(2). (?) Andaman languages. [See under XXXVII.]

(3). Nicobar languages,[5] &c. &c. &c.

LXXVI. Micronesian (agglutinative) :—Gilbert Islands:[6] Ponape:[7] Ladrone: Yap: Marshall Islands (Ebon): Tobi.

[1] "Contributions," &c., pp. 12-14.

[2] Radloff in "Mémoires de l'Académie impériale des Sciences de St. Pétersbourg," vii. pp. 382, *sq.* (1851).

[3] Schiefner in the "Bulletin de l'Académie impériale des Sciences de St. Pétersbourg" (1859).

[4] Castrén: "Versuch einer jenissei-ostjakischen und kottischen Sprachlehre" (1858).

[5] De Roepstorff gives a vocabulary of five dialects (Calcutta, 1875).

[6] Hale in "United States Exploring Expedition," 1838-42, vol. vii.

[7] Gulick; "Grammar and Vocabulary of the Ponape Language," in the "Journal of the American Oriental Society," x. (1872).

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CHAPTER VII.

THE INFLECTIONAL FAMILIES OF SPEECH.

"Si nous connaissons la langue des Aryas telle qu'elle existait vers le moment de leur dispersion finale, et sans doute déjà divisée en dialectes, nous pourrions y retrouver avec beaucoup de sûreté l'histoire de leur développement antérieur dans ses phases successives."—PICTET.

PROPHETS and preachers have never been weary of denouncing the innate vanity and deceitfulness of the human heart, but their success hitherto has been but scanty. It is difficult, if not impossible, to see ourselves with the eyes of others, to measure truly our own importance and that of the society in which we live. It is only the historian of a later age that can calmly and impartially trace the causes and effects of the events which have marked a particular era; the actors themselves, as well as those who live near the same epoch, behold everything through a blurred and distorted medium, wherein the true proportions of things are altogether lost. The greatest of thinkers have never been able to free themselves wholly from the prejudices and habits of their time: Aristotle could not conceive of a state of society in which slavery did not exist; and Lord Bacon, like his contemporary Raleigh, still retained a lingering belief in astrology, even saying that "comets without doubt have power over the gross and mass of things." We are apt

to fancy that the culture and civilization of modern Europe are superior to those of any other age or of any other part of the world; the Anglo-Indian calls the descendants of Manu and Vikramaditya "niggers," and a great English poet has declared: "Better fifty years of Europe than a cycle of Cathay." It is hard to remember that ours is not the only civilization the world has seen; that in many things it falls short of that of Athens, or even those of ancient Egypt and Babylonia, or modern Japan; and that we are not the best judges of our own deservings.

The spirit of vanity has invaded the science of language itself. We have come to think that not only is the race to which we belong superior to all others, but that the languages we speak are equally superior. That inflection is the supreme effort of linguistic energy, that it marks the highest stage in the development of speech, is regarded as a self-evident axiom. The Greek and Latin classics have formed the staple and foundation of our education, and if we have advanced beyond them, it is generally to the study of Hebrew or Sanskrit, themselves also inflected tongues. The inflected Aryan languages, whether living or dead, have formed our canons of taste, and our judgment of what is right or wrong in the matter of language. Even the grammars of our own English speech have been forced into a classical mould, and been adorned with tenses and cases, if not genders. The belief that whatever is unfamiliar must be either wrong or absurd, exercises a wider influence than is ordinarily imagined. Everything has tended to make the European scholar see in an inflected language the normal

type of a perfect and cultivated tongue. The dialects he speaks or studies are mostly inflectional ones, and even should he be acquainted with languages like Chinese or Basque, which belong to another class of speech, the acquaintance has seldom been made in the earlier and more impressionable years of life.

But there is a further reason for the widespread opinion that an inflectional language must necessarily rank before all others. The founders and cultivators of comparative philology were Germans, who spoke therefore one of the most highly inflected languages of modern Europe. The vanity of race and education was thus supplemented by the vanity of nationality and custom. The great Grimm, it is true, recognized the superiority of grammarless English, and even urged his countrymen to adopt it, but it is needless to say that he met with no support. It was just the "poverty" and want of inflections which characterize modern English, that seemed to indicate its degenerate and imperfect nature. If great works had been produced in it, this was in spite of its character, not by reason of it. The prejudices of a classical education were still strong; the literature of a language was confounded with the language itself, and the fallacy maintained that because certain writers of Greece, or Rome, or Judea were models of style, the languages in which they wrote must be models too. Comparative philology has had a slow and laborious task in rooting up these false notions, and laying down that whatever may be its form, that language is best which best expresses the thoughts of its speakers. Language is an object of study in and for itself, not because of the books that may have been composed in it, and

it not unfrequently happens that some of the most precious of its secrets are to be discovered in jargons the very names of which are almost unknown. It is not in Greek or Latin or Sanskrit that we shall find the answers to many of the most pressing questions of linguistic science, but in the living dialects of the present world. The antiquarian study of language is no doubt indispensable to a historical science like glottology; but this antiquarian study must be preceded, corrected, and verified, by a study of the pronunciation and usages of actual speech. Comparative philology rests upon phonology, and in phonology we must begin with the known sounds of living language.

Just as the type of physical beauty differs among the various races of the earth, so, too, does the type of literary excellence. The Chinaman finds more to admire in the language and style of his classics than in those of Plato or Shakspeare, and Montezuma would probably have preferred an Aztec poem to all the works of Æschylus or Goethe. If we are to decide between the rival claims of different forms of speech to pre-eminence, it must be upon other grounds than the excellency of the literature belonging to them; and we have already seen in a previous chapter how seriously it may be doubted whether, after all, an inflectional language stands on a higher level than an agglutinative one.

The number of known inflectional families of speech is not large, though the literary and historical importance of two of them far exceeds that of any other group of languages. Passing by Hottentot, the inflectional character of which, though maintained by Bleek and

Lepsius, is denied by Friedrich Müller, all the inflectional languages of which we know are confined to Western Europe and the basin of the Mediterranean. South of the Caucasus comes Georgian, the leading representative of the so-called Alarodian family, to which the dialect of the cuneiform inscriptions of Van may have belonged. It is just possible that the extinct language of the Lykian inscriptions is to be included in this family, though Savelsberg and others would connect it with the Indo-European group, and especially with Zend. Neither roots nor grammatical forms, however, seem to permit this; and it is for the present safest to regard the ancient Lykian as, like the Etruscan, a relic of an otherwise extinct family of speech. South of Georgia, again, comes the domain of the Semitic languages which once extended from the Tigris to the Mediterranean, and from the Tauros and Zagros ranges to the Indian Ocean and Abyssinia. Probably the Old Egyptian of the monuments, which goes back to between 4000 and 5000 B.C., along with its daughter, Coptic, must be considered as remotely connected with the Semitic group, as well as the so-called Sub-Semitic dialects of northern Africa, Berber, Haussa, &c. The larger part of Europe, together with India, Persia, and Armenia, is occupied by the Aryan family which has now scattered its colonies over the whole world. In fact, modern emigration is almost wholly confined to Aryans, Jews, and Chinese.

The Aryan or Indo-European family has been baptized with a variety of names. "Indo-European" is perhaps the one in most favour, and the chief objection to it is its length. "Indo-Germanic," the term chosen by Bopp, has

now a wide circulation among German scholars, "for no other assignable reason," says Prof. Whitney, "than that it contains the foreign appellation of their own particular branch, as given by their conquerors and teachers, the Romans."[1] "Sanskritic" has also been proposed, but is now universally discarded, as giving undue prominence to a single representative of the family. "Japhetic," modelled after "Semitic," is still occasionally used; it is, however, thoroughly objectionable, as the so-called "ethnological table" in Genesis is really geographical, and the descendants of Japhet do not cover the different branches of the Aryan group. "Caucasian" is another term, which has been immortalized by Tennyson; but the term originated rather with the physiologists than the philologists, and is in no way applicable, since none of the Caucasian tribes, with the single exception of the little colony of the Iron or Ossetes, belong to the Aryan race. Iron is but a form of Aryan, a name which is due to Prof. Max Müller. In the Rig-Veda, "*ârya* occurs frequently as a national name and as a name of honour, comprising the worshippers of the gods of the Brahmans, as opposed to their enemies, who are called in the Veda *Dasyus*."[2] The word is a derivative from *arya*, perhaps "ploughman" or "cultivator," which is applied in later Sanskrit to the Vaiśyas or "householders" of the third caste. The great recommendation which "Aryan" possesses is its shortness, and since it has been widely adopted it is the term which is generally used in the present work. It must not be forgotten,

[1] "Life and Growth of Language" (1875), p. 180.
[2] Max Müller: "Lectures," i. (8th edition), p. 275.

however, that the term is really of Sanskrit origin, and therefore more applicable to the Asiatic branch of the Indo-European family than to its European branch. It is on this account that certain French scholars, while adopting Chavée's "Aryaque" as a designation for the whole family, confine "Aryan" to its eastern members, making it include both Indic and Iranian. On the other hand, Prof. Max Müller may be right in seeing the word in Aria, the old name of Thrace, as well as in the German Arii, near the Vistula, whose name, however, Grimm would connect with the Gothic *harji*, "army."

A glance at the genealogical table in the last chapter will show that the Aryan family must be subdivided into East Aryan or Indo-Iranian and West Aryan or European, the first branch comprising Indian (Sanskrit, Prakrit, Hindi, &c.) and Persian (sometimes called Iranian), the second Greek, Italic, Keltic, Slavonic, Lithuanian, and Keltic. Hübschmann would place Armenian and Ossetic between these two groups; Friedrich Müller, on the contrary, makes them Persian dialects. The main difficulty in the way of Hübschmann's view is that the cuneiform inscriptions of Assyria show no indications of any Aryan settlers in Armenia or the Caucasus before the eighth or seventh century B.C., even the Aryan Medes, like their brethren the Persians, not advancing so far to the west as Media Rhagiana until the ninth century B.C. It is, of course, quite possible that the Armenians may have crossed the Caucasus in the wake of the Scythians, but Fick seems to have proved that the Scythic words preserved by the classical writers belong to the European, and not to the Iranian branch of the Aryan

family. The scanty relics of the Aryan languages of Asia Minor found in inscriptions and the glosses of Greek grammarians belong to the Western division of the family, and thus bear out the old traditions which made Lydians, Carians, Mysians, and Phrygians brethren one of the other, which derived the Mysians from Thrace, and saw in the Phrygians the Thracian Briges. The Halys formed the eastern boundary of Aryan domination in Asia Minor; the country beyond was possessed perhaps by Alarodians, certainly by tribes not of the Aryan stock.

At the head of the Indian group of dialects stands Sanskrit, the classical language of Hindustan and its sacred books, which though long since extinct, is still spoken by the Brahmans as Latin was in the Middle Ages. We must distinguish, however, between Vedic Sanskrit and classical Sanskrit, the older Sanskrit of the Veda differing in many respects from the later Sanskrit of the Hindu epics. Thus the second and fifth lines of the first hymn of the Rig-Veda end with the words *vakshati* and *gamat*, forms unknown to classical Sanskrit, but corresponding to the Greek sigmatic and "second" aorists conjunctive (τύψη(τ) and τύπη(τ)), from the roots *vach*, "to speak," and *gam*, "to go." So, too, the old modal forms of the aorist disappear in the post-Vedic language, with the exception of the precative or benedictive,[1] as well as the augmented preterite, which Delbrück has compared with the Homeric pluperfect, while post-

[1] The benedictive is really the optative of the simple aorist in the parasmaipada or active voice, and of the sigmatic aorist in the âtmanepada or middle voice.

Vedic Sanskrit introduces a new tense in the shape of the first future *bhavitâsmi*, a compound of the noun *bhavi-tar* and the substantive verb *asmi*.

Both Vedic and post-Vedic Sanskrit were poor in vowels, possessing only *a*, *i*, and *u* long and short, with the diphthongs *e*, *ai*, *o*, and *au*, and the linguals *ṛ* and *ḷ*; on the other hand, they were rich in consonants, among which the "cerebral" or linguo-dental *ṭ* and *ḍ* are usually supposed to have been borrowed from the Dravidian tongues.[1] The euphonic laws are strict and delicate, the final sounds of a word being affected by the initial sounds of the word following according to precise and well-observed rules. The syntax is comparatively simple, composition taking its place, especially in the later period of the language. The grammatical forms, however, are very full and clear, and it is to them that Sanskrit mainly owes the high position that it has occupied in the comparative study of Aryan speech. It has often preserved archaic forms that have been obscured elsewhere, though it must not be forgotten that this is by no means invariably the case; Greek and Latin, for instance, are sometimes more primitive than the old language of India. The declension is especially complete, preserving the dual as well as a locative and an instrumental. Other cases, however, which must have been once possessed by the parent-speech, have either disappeared or left faint traces behind them; thus we have the secondary abla-

[1] Such is still Bishop Caldwell's opinion in the 2nd edition of his "Comparative Grammar of the Dravidian Languages" (1875), but it must be remembered that these consonants are possessed by the Aryan Pashtu of Afghanistan, west of the Indus.

tives *mat-tas*, "from me," *twat-tas*, "from thee," like the Latin *peni-tus* and *radici-tus*, where Prof. Max Müller has shown that the forms *mat* and *twat* are merely stems.[1] The Sanskrit alphabet, known as the Devanâgari or "divine writing," was introduced into India from the West, and is probably based on an Aramean original; as the first inscriptions composed in it are not older than the third century B.C., it is plain that the *Yavânânî*, or "writing of the Yavanas,"[2] of Paṇini must refer to a different and now forgotten mode of writing. The word *Sanskṛita* means "put together," or "perfect," as distinguished from *Prâkṛita*, "derived from a model," that is to say, "secondhand" or "vulgar," *prâkṛita* being the name assigned to the current language of the people at a time when the Sanskrit was rapidly becoming extinct, or was confined to the literary and priestly classes. The Prâkrit dialects followed upon Sanskrit just as the Romanic dialects of Europe followed upon Latin, and the inscriptions of the Western caves, as well as the language of the lower orders in the plays, prove that they had already taken the place of the classical tongue two or three hundred years before the Christian era. One of the Prâkrit dialects, the Pâli of Magadha or Behár, in north-eastern India, was transported by Buddhist missionaries to Ceylon, and there became the sacred language of the new faith.[3] Pâli, now dead like Sanskrit

[1] Fleckeisen's "Jahrbücher" (1877), p. 702.

[2] Max Müller disputes the view that this means the "writing of the Greeks," in "History of Ancient Sanskrit Literature," pp. 520, 521.

[3] This is the tradition of the Southern Buddhists themselves, but Pâli differs considerably from the Magadhi of the Prâkrit gram-

itself, shows in some respects a marked superiority over the Prakrits of the plays, and has certainly been less affected by phonetic decay than most of its sister idioms. The three Sanskrit sibilants, however, have been merged in one, the vowel *ṛi* has disappeared, being mostly replaced by *a*, the long vowels have been frequently shortened, the dual and dative are lost, and all words must end either in a simple or in a nasalized vowel. The modern Aryan languages of India have developed out of the other Prâkrits, and in their present form are considered not to go back further than the tenth century. Bengâli and Assamese retain many features of Sanskrit; Sindhi and Gujarâti in the north-west, Nepâli and Kashmiri in the north, Hindi in the centre, and Marâthi in the south, are all more or less changed from the primitive type. Hindi is merely the modern form of Hindui, a language which was much cultivated during the Middle Ages of recent Hindu literature, while Hindustâni or Urdu, the language of the "camp," is Hindi mixed with Arabic and Persian—in fact, a *lingua franca* which grew up at the time of the Mahommedan invasion in the eleventh century. The chief characteristic of these

mârians. Kern ("Over de Jaartelling der zuidelijke Buddhisten," 1873) believes it to be an artificial language based on some undetermined Prâkrit dialect; Pischel ("Academy," 1873, p. 397, *sq.*) maintains that Pâli was the popular Magadhi, the Magadhi of the grammarians and playwriters being an artificial jargon. Westergaard ("Indbydelsesskrift til Kjöbnhavns Universitets Aarsfest," 1860) has pointed out that Pâli is almost identical with the language of an inscription of A'soka, set up near Ujjayinî (Girnar in Guzerat), and he and Kuhn hold it to represent the dialect spoken in Mâlava in the third century B.C., and brought to Ceylon by the Buddhist apostle Mahendra.

modern dialects is their analytical tendency, even the plural being expressed by particular suffixes, while on the phonological side they incline towards assimilation, the change of *y* to *i* and *r* to *d*, and the substitution of the simple aspirate *h* for the aspirated explosives *kh*, *ph*, and *th*.

Among these neo-Hindu dialects must be included the Rommany of the Gipsies, who seem to have penetrated into Europe in the twelfth or thirteenth century of our era. Miklosich has endeavoured to trace their line of march by a careful examination of their vocabulary, and concludes that they must have passed successively through Persia, Armenia, Greece, Rumania, Hungary, and Bohemia, whence they scattered themselves towards Germany, Poland, Russia and Scandinavia, Italy and Spain, England and Scotland.[1]

Recent researches, and more especially the decipherment of early inscriptions, have obliged us to add the Sinhalese or Elu of Ceylon, in which the commentaries on the Buddhist canon were first written, to the Indian branch of the Aryan languages. According to Mr. Rhys Davids,[2] "it is based on the dialect spoken by the colony from Sinhapura in Lâla, on the west coast of India, who drove into the remote parts of the island the former inhabitants, borrowing very little indeed from their language. Later on the Sinhalese derived their religion and literature from the opposite side of India, but in

[1] "Ueber die Mundarten und die Wanderungen der Zigeuner Europas," Th. 2 (1873).

[2] "Annual Address of the President of the Philological Society" (1875), p. 73.

dialects akin to their own." Sinhalese possesses the linguals *ṭ* and *ḍ*, has lost all gender except in the pronouns and names of living things, all case-endings for adjectives, and many for nouns, as well as the person-endings of the verb, expresses number and case by postfixes, different postfixes being used for the plural of animate and inanimate beings, as in Persian, and has borrowed a large number of Sanskrit words.

West of the Indus is the Pashtu or Pakhtu of the Afghans, the descendants probably of the Paktyes of Herodotus, which has long been considered to belong to the Iranian group, but since Dr. Trumpp's labours must be classed among the Indian dialects. It forms a stepping-stone, as it were, between the Indian and Iranian divisions, partaking to a certain extent of the features of both, but with predominant Prâkrit characteristics. Like Sindhi, it has borrowed from its Iranian neighbours a whole system of pronominal suffixes. The language is also known under the names of Patan and Siyâh-Push.

In a small triangle to the extreme north of Afghanistan, with Badakshan on one side and Kashmir on the other, lies Dardistan, the country of the Dards, among whom Dr. Leitner has discovered a number of interesting dialects. The principal of these seems to be the Shinâ, a name sometimes applied to the whole Dardu group; among the others may be mentioned the Arnyiâ, the Khajunâ, the Ghilgiti, the Astori, and the Kalâsha-Mânder. Dard probably holds much the same position as Pashtu, being an Indian rather than an Iranian language. The present tense of the substantive verb in Arnyiâ is conjugated *asûm, asûs, asûr, asûsi, asûmi, asuni;*

the aspirated explosives are generally preserved instead of being changed into *h* as in the Prâkrits; and the past tense—at all events in Kalâsha—preserves the initial augment (as in Sanskrit and Greek).

We now come to the Persian or Iranian group, the most nearly akin to Sanskrit of all the Indo-European languages, and forming with the Indian dialects the Eastern or Asiatic branch of the family. In some respects, as in the retention of the old ablative in *at* or the preservation of the diphthong *au*, *ao*, Persian is more archaic than Vedic-Sanskrit. Its literary monuments, however, are of more recent date; the oldest parts of the Zend-Avesta, the Bible of the Zoroastrian faith, being younger than the hymns of the Rig-Veda and belonging to an age when a portion of the Aryan community had broken with the polytheistic religion of their brethren, and under the conduct, it may be, of an individual prophet, had turned back from the Punjab to the mountains of the north-west. But we have one great advantage in studying the Iranian group, and that is our opportunity of tracing the history of the language through successive and long-continued periods. We may divide this history into five periods, represented by Zend, Old or Achæmenian Persian, Huzvâresh or Pehlevi, Parsi, and Neo-Persian.

The first knowledge Europe obtained of Zend and the Zend-avesta was due to the enthusiasm of a Frenchman, Anquetil Duperron, who, without means, and in the face of great hardship, learnt the language from some Parsi priests at Surat, and returned to France in 1762 with over a hundred MSS. These enabled Eugène Burnouf

to correct the attempt of Duperron to translate the Zend-avesta from a modern Persian translation, as well as the faulty and uncritical teaching of the language he had received from the Parsi priests. Burnouf must be regarded as the true founder of Zend philology.

Now Zend was the language of the ancient Persian Zoroastrians, or worshippers of Ormazd, in eastern Iran, and consequently the language in which their sacred books were composed. All that has come down to us of the latter are the four books—the Ya'sna, the Vispered, the Yashts, and the Vendidad—which make up the present Bible of the Zoroastrian or Parsi community, the last of them giving a legendary account of the early migrations of the Iranian tribes. The modern Parsis regard *avesta* as meaning the text, and *zend* as the Pehlevi commentary; but this is certainly wrong, and Prof. Haug would explain the first by a hypothetical *âvista*, "what is notified," from *â-vid*, the second being usually taken as a corruption of *zainti*, "knowledge," the Sanskrit *jânti* (γνῶσις). Dr. Oppert is probably right in thinking that neither *zend* nor *avesta* belonged to the dialect of eastern Iran, but are identical with two words (*zandî* and *âbastâyâ*) which occur in the cuneiform inscriptions of western Persia, and mean respectively "prayer" and "law." At any rate, the great inscription set up at Behistun by Darius Hystaspis, commemorates his restoration not only of the Zoroastrian faith after its overthrow by the Turanian Magi, but also of the text and commentary of the Zend-avesta itself, which had been neglected or proscribed. In a passage, unfortunately defaced in the Persian original, but preserved in the Protomedic

version, we find, according to Dr. Oppert's version :— "And Darius the king says : I have made also elsewhere a book in the Aryan language, that formerly did not exist. And I have made the text of the Divine Law (*Avesta*), and a commentary of the Divine Law, and the prayer, and the translation. And it was written, and I sealed it. And then the ancient book was restored by me in all nations, and the nations followed it."[1] In fact, Darius describes himself as acting like another Ezra of the Jewish tradition, and there can be little doubt that additions were made to the book at this time. Indeed, we can clearly distinguish fragments of varying antiquity in the portions that have been preserved. The Gâthâs, certain obscure hymns in the Ya'sna, are older than any other part of the Zend-avesta, in spite of Prof. de Harlez's doubts ;[2] they are quoted or referred to in all other parts, and stand to the latter in much the same relation as the Rig-Veda stands to the later Vedic and Brâhmanic literature. The dialect of the Gâthâs differs slightly from that of the remaining Zend writings, possibly because it is earlier, possibly because it was spoken in the highland regions. However this may be, both dialects are included in the Zend, the oldest form of Persian speech to which we can go back. As Zend was the language of eastern Iran, bounded by Sogdiana on the north, by Hyrcania on the west, and by Arachosia on the south, it is frequently called Bactrian or Old Bactrian. It seems to have lingered on till the Greek period,

[1] "Records of the Past" (1876), vii. p. 109. Dr. Oppert has omitted the words "by the favour of Ormazd," which introduce the king's assertion.

[2] Avesta : "Livre sacré des Sectateurs de Zoroastre" (1875-6).

and thus to have been a contemporary of the Old or Achæmenian Persian which was spoken in the west.

The latter dialect has been recovered from the cuneiform monuments of Darius Hystaspis and his successors, the key to which was first found by the genius of Grotefend. In some points Old Persian is less removed from the primitive Aryan than is Zend; generally speaking, however, the contrary is the case. The cuneiform alphabet of forty characters in which the inscriptions are written was obtained in a very ingenious manner from the complicated syllabary of Assyria and Babylon, apparently under the direction of Darius himself. It fell into disuse, however, almost before a century had passed. What kind of writing was used by the eastern Iranians before the time of Darius it is impossible even to conjecture.

Pehlevi or Huzvâresh is known to us by translations of the Zend-avesta, a treatise on cosmogony called the "Bundehesh," and the coins and inscriptions of the Sassanian dynasty (A.D. 226-651), and seems to have been the language of the western district of Sevâd, though subdivided into the two dialects of Chaldæo-Pehlevi and Sassano-Pehlevi. Not only its vocabulary, but even its grammar has been invaded in a most extraordinary way by Semitic influences, and if we are to suppose that the language we find in books and inscriptions was ever spoken beyond the limits of a Court circle, we shall have to admit the possibility of a mixed grammar. It seems most probable, however, that the mixture was to be found rather in the writing than in the spoken language; at all events the Huzvâresh translation of the Avesta was read by substituting Iranian for Aramean

expressions, Iranian terminations being added in the MSS. to Semitic words. While this curious idiom was being cultivated in the west, another idiom, Parsi or Pâzend, had grown up in the east, and was perpetuated in India by the Guebres, or fire-worshippers, who fled from Mahommedan persecution to Guzerat. Parsi differs but slightly from the language of Firdusi, the great epic poet of Persia, whose "Shahnámeh" or "Book of Kings," commemorating the past glories of Aryan Persia, was composed about 1000 A.D. With Firdusi the history of modern Persian begins; in his hands it is a pure Aryan dialect, free from foreign admixture; but by slow degrees it incorporated an increasingly large Semitic element until its dictionary became half-filled with Arabic words. Neo-Persian resembles English in the simplicity of its grammar; it has even rid itself of any distinction of gender in the third personal pronoun, while the idea of the genitive is expressed by the vowel *i*, a remnant of an old relative; the language, nevertheless, is melodious and forcible, and Persian poetry takes a high rank. Of course, the literary dialect of modern Persia is only one out of many; among the provincial dialects the best known is perhaps that of Mazenderan.

But we have not yet finished our survey of the languages belonging to the Iranian section of Indo-European speech. There still remain the Kurdic dialects, of which the chief are the Kurmanji between Mosul and Asia Minor and the Zaza, the Beluchi of Beluchistan, and the dialects of the Lurs (Bashiari and Faïli), of the Tāts in the south-east of the Caucasus, and of the Iron or Os-

setes in the same neighbourhood. Ossetian is divided into a great variety of *patois*, and is closely connected with the Armenian, which along with it, must be excluded from the Iranian group, if Hübschmann's opinion is right. The classic period of Armenian begins with the formation of the alphabet by Mesrop in the fifth century of our era, and the works of Moses of Chorene, Lazar of Pharp, Eznik of Kolb, and others. The literary dialect declined in the eleventh century, when the local *patois* began to take its place. A leading phonetic feature of Armenian is the change of the hard into the soft explosives, and of the soft into the hard ones, while original *p* becomes *h* (as in *hayr*=*pater*). Three new tenses—a perfect, a pluperfect, and a future—have been created in the verb by the help of participles.

We must now pass at a leap to the westernmost of all the Aryan languages, that still spoken by the Kelts of Wales, Brittany, Ireland, and the Scotch highlands. Cornish became extinct only in the last century, and Manx may even now be occasionally heard in the Isle of Man. The ancient Gaulish or Gallic disappeared wholly from France before the inroads of Latin and Teutonic, leaving behind it only some twenty or thirty half-deciphered inscriptions in Roman characters; but its utter disappearance must have been subsequent to the time of Sidonius Apollinarius, who congratulates Ecdicius, his brother-in-law, on inducing the Arvernian nobility to give up the use of the Keltic language.[1] The Breton or

[1] "Quod sermonis Celtici squamam depositura nobilitas, nunc oratorico stylo, nunc etiam camænalibus modis imbuebatur," "Epist." 3. iii.

Armorican of Brittany was a subsequent importation, derived from the Britons of Cornwall and South Wales, who were led there by Maximus in the fifth century, or afterwards driven out of their country by the Saxon invaders. The Keltic tongues are generally divided into Kymric, comprising Welsh, Cornish, Breton and Gaulish, and Gaelic or Goidelic, which includes Irish or Erse, Scotch Gaelic (also called Erse), and Manx. This division, however, is founded on the supposed fact that Kymric and Gaulish agree in changing *c* (*qu*) into *p*, and since the supposed fact turns out not to be a fact at all, Welsh preserving the original velar guttural on its inscribed stones up to the seventh century, Prof. Rhŷs has proposed a new classification of the Keltic race into insular and continental. The Gauls of the Continent had transformed their *k*'s into *p*'s centuries before their kinsmen in Britain did so, and if we find local names of Keltic origin in the south of England which contain *p* instead of *k*, this is to be accounted for by the Gaulish conquest and occupation of this part of our island to which Cæsar is a witness.[1] There was a time when a Keltic-speaking people inhabited parts of Switzerland, the Tyrol, and even the country south of the Danube, as may be proved by the evidence of local names, as well as those of certain plants of Dacia described by the physician Dioskorides; but it has left but little trace behind, and like the rest of the Keltic family, been pressed westward by the stronger tribes from the east. The Kelts of Gaul, however, took their revenge by military expeditions southward and

[1] See Rhys: "Lectures on Welsh Philology" (1877), pp. 19 *sq.*

eastward, among which the two most celebrated are those led by the Brennus or "king" (Welsh *brennin*) when Rome was destroyed B.C. 390, and Delphi threatened a hundred years later. Unsuccessful in Greece, the Gauls settled in some places on the Thracian coast, while a much larger colony crossed into Asia Minor, and there occupied the district called Galatia after them. The Galatian language survived down to the days of St. Jerome.

The Keltic dialects are distinguished by a regular mutation of the initial consonants, as it is termed, the final letters of one word influencing, as in Sanskrit, those of the following word. But their grammar also displays certain features which seem to indicate the action of a non-Aryan influence at a time when the Aryan Kelts were in close contact with the earlier populations of western Europe. Prof. Rhŷs has suggested the possibility of seeing Basque or "Iberian" influence in the incorporation of the pronouns between the Irish verb and its prefixes, a phænomenon that appears exceptionally in Welsh, as well as in the Breton verb *to have*. The differentiation of the verb and noun, again, which had been effected at an early time in Aryan, has been partly effaced in Welsh, as though the latter language had come into contact with one in which the verb and noun were not distinguished; while the inflection of the Welsh prepositions (as *erof*, "for me," *erot*, "for thee"), and of the substantive *yr eiddof*, "my property," *i. e.* "mine," reminds us strongly of Magyár usage. It is remarkable that we find a mixture of two very distinct races among all Keltic-speaking peoples; the first, generally called "Iberian" by physiologists, being short and brachyce-

phalic with black eyes and hair, and the second, the pure Keltic, being, on the contrary, tall and fair with long skulls, light hair, and blue eyes.

Excepting glosses of the eighth century, and a few inscriptions of still earlier date, Welsh literature begins with the revival in the eleventh century, when such of the older poems as had been preserved were modernized in language, and a large number of additions were made to them and ascribed to the traditional names of Aneurin, Taliessin, and other bards. The best part of the literature belongs to the next two centuries, when among other productions the Triads and a number of chronicles were composed.

The oldest literary relic of Cornish is a glossary entitled "Vocabula Britannica," of the twelth or thirteenth century.[1] The only remarkable specimen of Cornish literature, however, is a Passion-play of the fifteenth century, which is full of English loan-words.[2]

In Breton we have the chartularies of the monasteries of Rhedon and Landevin, dating from the tenth and eleventh centuries,[3] the "Buhez Santez Nonn," or "Life of Saint Nonna,"[4] of the fourteenth century, and a few other works. The "ancient" Breton poems given by Villeneuve in his "Barzaz Breiz" have unfortunately been proved to be as modern as the "Bepred Breizad" or "Toujours Breton" of M. Luzel.

[1] Marked Vesp. A 14 in the Cotton Collection in the British Museum, and edited in Norris's "Cornish Drama," vol. ii.

[2] Edited by Whitley Stokes in the "Transactions of the Philological Society of London" (1862).

[3] See Courson's "Histoire des Peuples Bretons" (1846).

[4] Edited by Legonidec (1837).

Irish literature is perhaps the oldest and most important of any produced by a Keltic people. Glosses of the eighth century, ecclesiastical and poetical literature, tales and chronicles such as the famous "Annals of the Four Masters," are among the works that may be mentioned. The "Book of Kells," now preserved in the Library of Trinity College, Dublin, and written in Latin, is the most exquisite example in the world of that minute and intricate style of illuminating for which the Irish monks were especially esteemed. In the earlier part of the Middle Ages, indeed, Ireland, "The Isle of the Saints," was regarded as a centre of light and intelligence, and it was not without reason that Charlemagne made "Clement the Scot" head of the Palatine School, and established another Irishman, John of Mailros, at Pavia. A considerable number of early inscriptions have been discovered in Ireland, written in the so-called Ogham characters, which are also met with in Wales and England. Prof. Rhŷs has attempted to show, with fair success, that the Ogmic alphabet was primarily derived by the Kymric Kelts from a Teutonic people, and afterwards passed on to the Kelts of Ireland.[1]

Scotch Gaelic is the most corrupt of all the Keltic tongues, and its pronunciation bears but a very faint resemblance to its spelling. Its chief literary interest is connected with the Ossianic controversy, which is still far from being completely settled. The Dean of Lismore's book, however, compiled about 1530, and containing popular poems relating to Fingal the Finn, some of which are ascribed to Ossian, make it clear that

[1] See his "Lectures on Welsh Philology" (1877).

Macpherson had genuine materials before him, however much he may have improved upon his originals. His "Ossian," indeed, would never have had the success it obtained had it not breathed, to a certain extent, the spirit of the eighteenth century. Various minor poets have arisen among the Scotch Highlanders during the past two hundred years, and specimens of their productions are given in English verse by Prof. Blackie in his "Language and Literature of the Scottish Highlands" (1876), where he also sums up the history and present position of the "Ossianic question."

Wherever the Kelt has gone he has been followed by the Teuton, and little by little has had to make way before his stronger and more stolid supplanter. The Teutonic group includes also the Scandinavian, and it is not difficult to form a hypothetical grammar and dictionary of the language once spoken by the common ancestors of Germans and Norsemen. Both, in fact, are branches of a single stem. We may divide the Teutonic family into four groups—the Gothic, the Norse, the Low German, and the High German, their chief features being the adaptation of the *Ablaut* or change of vowel in the verbal conjugation to express the distinction between present, past, and participle (as in *sing*, *sang*, *sung*). Gothic or Mæsogothic represents the first group of which we have literary record, and in some respects, such as the simpler character of the vocalism, the cases of the noun, and the dual of the verb, it shows more signs of archaism than its sister dialects. Our knowledge of Gothic, however, is almost entirely confined to the fragments that remain of the Gothic version of the Bible made by the

Arian bishop Wulfila or Ulphilas in Mæsia (born A.D. 318, died 388). His parents had been carried captive from Cappadocia by Gothic invaders, and after converting large numbers of the Goths to Christianity, he and his converts had to escape into Roman territory shortly before Constantine's death. It says much both for the difficulties he must have encountered, and for his own practical sense, that he refused to translate the books of Kings on the ground that the Goths were already too fond of war and bloodshed. The famous "Codex argenteus," now preserved at Upsala, is the main authority for the text of his Bible, of which all that is left are considerable portions of the Gospels, the Epistles of St. Paul, and fragments of a Psalm, of Ezra, and of Nehemiah. Excluding a mutilated calendar, and two short documents from Naples and Arezzo, this constitutes all the materials we have for a study of the Gothic tongue. The language seems to have died out in the ninth century. Its phonetic system agrees with that of the Low German, and not of the High German group.

Norse is represented by Icelandic and Norwegian, Danish and Swedish, the two first forming the East Scandinavian section, the two latter the West Scandinavian. Icelandic, thanks to its isolation, has changed but little since its importation into the island in the ninth century, and is practically identical with the Old Norse, the Dansk of the Skalds or poets, and the Court dialect of all the Scandinavian nations as late as the eleventh century. The East Scandinavians had advanced along the Bothnian Gulf, driving out the Finnic population they found there, while the western branch crossed over

from the continent to the Aland Islands, and from thence to the southern coast of the peninsula. The two Runic alphabets of sixteen and twenty-four letters, both derived according to the usual view from the Latin capitals, were chiefly used by the Scandinavian tribes, though not unknown to the other members of the Teutonic family, and the earliest Runic inscriptions yet found cannot be much later than 200 A.D.[1] The stones of the prehistoric tumulus of Maeshow in the Orkneys are still scored with the runes of Norse marauders, who broke into it in search of treasure about 1150, and they let us see how widely spread a knowledge of this mode of writing must have been among the people. But the old poetry of the Skalds, including short songs (*lliod* or *quida*) on the deeds of the gods and heroes, was first collected and committed to writing in Iceland in the twelfth century. This collection of mythic poems goes by the name of the "Edda" or "Great-Grandmother," and is ascribed to Saemund Sigfusson (died 1133). The younger, or prose "Edda," was the work of Snorri Sturluson, who died in 1241, and consists of three parts—the mocking of Gylfi, the speeches of Bragi, and the Skalda, a sort of Norse "Ars Poetica." The poetical language described in the Skalda was as artificial as that of the Arabs; objects were to be called by a variety of epithets, some obvious, some far-fetched, but seldom by their proper names, and the accumulation of synonyms accordingly became im-

[1] See Wimmer: "Runeskriftens Oprindelse og Udvikling i Norden" (1874). Mr. Isaac Taylor, however, seems to have proved that the runes were derived from an Ionic Greek alphabet of the sixth century, B.C. See his work on the "Alphabet" (1879).

mense. Thus an island could be called by 120 different words, and a sword by nearly as many. This poetical dialect made free use of foreign words, and we find a poem called the "Alvíssmal" (or "Speech of the Allwise"), preserved in the Old Edda, assigning the Low German *biórr* ("beer") to the Æsir or gods, while the Norse *ol* or *ale* belongs to the language of men. It is hardly necessary to refer to the curious parallel and illustration this affords of the similar distinction drawn in Homer between the languages of "gods" and "men." The literary era of Iceland lasted till its conquest by Hacon VI. of Norway, and we owe to it the larger number of the Sagas, such as the story of the "Burnt Njal," or of "Grettir the Strong," which have recently attracted so much attention. The oldest monuments of Danish literature mount back to the thirteenth century, and among them we may perhaps include the Latin History of Saxo Grammaticus, embodying a number of ancient myths; modern literary Danish has grown out of the Zeeland dialect of the sixteenth century. Swedish and Lithuanian are the only two Aryan languages which have retained any traces of the original musical accent, and the number of vowels and diphthongs possessed by Old Norse is a proof of the delicate character of its organization.

The Low German family is especially interesting to the Englishman, whose own language belongs to it. Anglo-Saxon, that is, the three slightly varying Anglian, Kentish, and Saxon dialects,[1] was spoken by a mixture

[1] "The Anglian was characterized by a special tendency to throw off final *n*, and by a frequent use of the weak ending *u*(*n*).

of tribes from the north of Denmark and the whole coast of the German Ocean, and in spite of successive deposits of Danish, Norman-French, and Latin, has remained the kernel and essence of the English language up to the present day. The tribes who remained at home were afterwards termed Frisians, their oldest literary remains being some legal documents of the thirteenth century. The Frisic subdialects are very numerous, notwithstanding the smallness of the population that speaks them, but they have suddenly sprung into notoriety of late in consequence of the curious forgery known as "The Oera Linda Book," which professes to have been composed in the year 559 B.C. The earliest English or Anglo-Saxon production is the epic of Beowulf, of the seventh century, portions of which still breathe a pagan spirit; but it may have been composed on the continent. The literary dialect of Anglo-Saxon was destroyed by the Norman Conquest, and the period that followed—sometimes termed Semi-Saxon—was characterized by a struggle between the local dialects and Norman French. With the middle of the thirteenth century begins a new stage in the history of our speech, which for the sake of convenience may be called Early English; then comes Middle English, the Court dialect of Chaucer and his followers, succeeded by the Modern English of Elizabeth and our own day. Besides Frisic, Anglo-Saxon claims

Kentish and Saxon agreed in the absence of these features. Saxon was distinguished both from Anglian and Kentish by its *æ* for *é*. Kentish, finally, was separated from the others by its occasional *ei* for *eg*." Sweet: "Dialects and Prehistoric Forms of English," in the "Transactions of the Philological Society of London," 1876 (p. 19).

close relationship with the Old Saxon of the south between the Rhine and the Elbe; indeed, from the second to the fifth centuries the three groups of dialects, Frisic, Anglo-Saxon, and Old Saxon, probably formed but a single language, which differed chiefly from the extant Old Saxon in its preservation of the diphthong *ai* and of the thematic *i* and *u*.[1] The most important relic of this Old Saxon tongue is the Christian poem of the "Hêliand," or "Saviour," preserved in two MSS. of the ninth century.[2] Its modern representatives are the Low German proper, or "Platt Deutsch," spoken in the lowlands of northern Germany, and the Netherlandish, divided into its two dialects of Dutch and Flemish. Flemish was once the Court language of Flanders and Brabant, but has had to yield its place to the Dutch.

High German, with all its dialects, is the language of the greater part of modern Germany. Its history falls into three distinct periods. The Old High German period can be traced back to Charlemagne and the oaths of Strassburg, preserved in the "Annals" of Nithard,[3] and may be divided into Frankish, Alemanno-Suabian, and Austro-Bavarian. From the twelfth century onwards the vowel endings tend to disappear, and the language enters upon its second or Middle High German stage. This is the period of the redaction of the Nibelungen Lied and of the great Minnesingers, Walther von der Vogelweide, Wolfram von Eschenbach, and Tanhûser. The Court

[1] Sweet: *loc. cit.* p. 27.

[2] Edited by Schmeller: "Hêliand: Poema Saxonicum Sæculi noni" (1830).

[3] Edited by Pertz (1839), pp. 38, 39.

dialect was based on that used in Suabia. Early in the sixteenth century New High German took its rise in the Chancelleries, and through the influence of Luther, who had adopted it in his translation of the Bible, gradually became the standard of educated speech.

We must now turn to the Letto-Slavic languages, which, like the Keltic on the west, have been perpetually pushed back by the more vigorous and encroaching Teutonic. Old Prussian is extinct, like the Slavonic tongues of German Austria, and it is somewhat remarkable that both the capitals of modern Germany—Berlin and Vienna—stand on ground that was once Slavonic. The Lettic and Slavonic groups bear much the same relation to one another as the Scandinavian and German, but the first, though confined to a comparatively small district, is decidedly the more archaic, and nearest the primitive Aryan speech. In certain points Lithuanian grammar is of an older type than even that of Sanskrit—*essi*, "thou art," for instance—but in most respects the converse is the case. So far as the conjugation is concerned, Lithuanian is far inferior to the oldest known Slavonic. This is Church Slavonic or Old Bulgarian, once spoken from the Adriatic to the Danube and Black Sea, and still the liturgical language of the orthodox Slav. Owing to slight changes inevitably introduced into it in the course of time, this Church Slavonic may be classified as Old and New. It was the language into which the Bible was translated by the brothers (Constantine) Cyrillus and Methodius in the ninth century, the oldest copy of the translation being the Gospel of Ostromir, 1056 A.D. The Greek alphabet was modified by Cyrillus to suit the

peculiarities of Slavonic pronunciation, but the Slavs belonging to the Latin Church rejected this in favour of another called Glagolitic. The modern dialects of the Slavonic family are the Russian, the Ruthenian or Little Russian, the Polish, the Czech (Chek) or Bohemian, the Slovak, the Slovenian, the two Sorabian idioms, also called Wendic and Lusatian, the Bulgarian, and the Servo-Croatian. Russian (or Great Russian) is characterized by the same phonetic and grammatical complexity as the sister Slavonic tongues, and its power of forming agglutinative compounds has often been noticed. Thus the two words *bez Boga*, "without God," can be fused into a single whole, from which, by the help of an adjectival suffix, *bezbozhnŭ*, "godless," can be formed; from this, again, the noun *bezbozhnik*, "an atheist," then the denominative verb *beznozhnichat*, "to be an atheist," with a whole crop of derivatives, including the abstract *bezbozhnichestvo*, "the condition of being an atheist," from which we finally get the barbarous compound *bezbozhnichestvovat*," "to be in the condition of being an atheist." Participles, too, have replaced the aorist and imperfect, which have also been lost in Ruthenian, though retained in Servian and Bulgarian, and in this change we may perhaps trace the influence of those Tatar tribes whose blood enters so largely into that of the modern Russian community.

Ruthenian or Rusniak occupies a large part of southern Russia, comprising Kiev, the ancient capital, and is also spoken over a considerable portion of Galicia. Its literature is chiefly national and traditional, like that of Russian proper, which has shown signs of activity and

originality only since the age of Lomonosov (1711-1760). Ruthenian differs from Russian in several points, among which may be mentioned the loss of the present passive participle and the possession of infinitives with diminutive endings. A far more cultivated tongue is the Polish, which has a literature reaching back to the end of the tenth century. This, however, was for the most part in Latin; a strictly native literature cannot be said to commence before the fourteenth century. Polish is divided into a variety of dialects, which Russian and Prussian despotism have been doing their best to stamp out, but it may be considered as still spoken by about ten millions. Words (foreign importations excepted) are accented on the penultima, in contrast to Czech and Sorabian, which accent the first syllable, while in Russian, Ruthenian, Slovenian, and Croato-Servian, the accent may fall on any part of the word. The consonants when in combination undergo considerable modification. Czech and the closely allied Slovak are spread over the whole of Bohemia, except a strip on the west and north, the greater part of Moravia and the tract to the south of Poland, and are the dialects of about 6,500,000 people. The earliest Bohemian documents go back to the eighth century, the first records being the MSS. of Královdor or Königenhof, and Zelenohora (Grünberg) discovered in 1817, which belong to the period of the conversion of the country to Christianity, and embody a number of interesting myths. Up to the Hussite war, Bohemian literature was much in advance of that of any of its Slavonic neighbours; it is only since the close of the last century that it has been again revived. The language has

changed considerably since it first comes before us in the eighth century, the old imperfect and aorist have disappeared, and phonetic decay has been somewhat active. Among the vowels at present possessed by it may be noticed the vocalic *r* and *l*, always short in Czech, but often long in Slovak, which give its words, when spelt, a strange appearance. A reform in the orthography of the language was completed in 1830 by substituting Roman for Gothic letters, and the Polish and German *w* has subsequently been discarded for the Latin *v*.

Sorbian or Sorabian is distinguished into two dialects, High Lusatian and Wendic, or High and Low Sorabian. The district in which it is spoken is now reduced to small dimensions watered by the Spree, and lying partly in Prussia, partly in Saxony. Its literature is insignificant, in spite of a literary society founded in 1845 to revive and cultivate it, and its first printed book is a work of Catholic devotion, published in 1512. Servo-Croatian or Illyrian, on the other hand, has of late been taking a somewhat prominent position. The countries over which it extends—Servia, Bosnia, Herzegovina, Montenegro, Slavonia, Croatia, and part of southern Hungary, have been made notorious by the events of the recent Turkish war. Istria and Dalmatia are also included in its domain, and though the dialects spoken over this large tract of country are necessarily numerous they may be divided into three main groups:—the Servian, the Dalmatian, and the Croato-Bosnian. The three groups are characterized by the different pronunciation of a vowel originally *é*, which at Belgrade remains *é*, while at Agram it appears as *i*, and in Cattaro as *yé* or *iyé*. Servian literature was

practically founded by Vouk Stephanovitch Karajich at the beginning of the present century, though the east Servian dialects can boast of documents at least five hundred years old, and the west Servian of records that date from the twelfth century, while the admirable literature of Ragusa goes back to the sixteenth. But it is the Pesma (Pisma) or ballad, which characterizes the native and national literature of Servia. Many of the ballads are quasi-historical, and of great age, and Kapper, in 1851, united a portion of them relating to the same mythical cycle in a long Epic, and so created a Servian Homer. A large number of Turkish and French words have found their way into the modern dialect, but the old aorist and imperfect have been retained (*bih* = "fui," *bijah* = "eram"), while a perfect has been formed by means of a participle, as *sam bio*, "I have been."

Slovenian is spread over southern Carinthia and Styria, as well as Carniola and a part of northern Istria, and is the native tongue of more than 1,200,000 persons. It is very closely connected with Servo-Croatian, and may be classed with the latter under the general name of Illyrian. Its literature begins with the sixteenth century, and it is the native dialect of the great Slavonic philologist, Miklosich. Last of the living Slavonic languages comes Bulgarian, spoken north and south of the Balkans by about 6,000,000 persons, a large part of whom, however, are Ugrian Huns by descent. The adoption of a Slavonic language by a race, whose skulls still belong to the Finnish type, according to Virchow, is an interesting illustration of the small relation that exists between philology and ethnology. The fact explains the attenu-

ated condition of Bulgarian grammar when compared with that of other Slavonic tongues, as well as the post-position of the article which it shares with Wallach and Albanian. The vocabulary also is full of Turkish, Greek, Albanian, and Rumanian words. Some efforts have been made of late years to introduce schools and a taste for literature into the country. Like Servo-Croatian, Ruthenian, and Russian, Bulgarian has lost the dual in the verbal conjugation possessed by Church Slavonic; on the other hand, in agreement with the other Slavonic languages, it has a "compound declension" in which the adjective is made definite by postfixing the pronoun *i*. Thus in Servian *rast visok* means "a lofty oak," *visoki rast*, "the lofty oak." The same form of declension is also met with in Lithuanian, and we may even compare the difference between the terminations of the German adjective, when standing alone or preceded by the article. It may be added that a Servian writer, Danitchitch, has lately proposed the following classification of the Slavonic tongues, on purely phonetic grounds:—

Primitive Slavonic
- Polish and Polabish
- Czech and Sorabian
- Church Slavonic
  - Ruthenian
  - Russian
  - Bulgarian
  - Slovenian
- Servo-Croatian

There are various other conflicting schemes, however, and the "primitive Slavonic" is probably a figment of the philological analyst, the several Slavonic languages

being the relics of co-existing dialects which existed from the beginning. Many of these dialects have of course perished, among them being the Polabish or old dialects of the Slavonians of the Elbe, whose literary remains belong to the beginning of the last and the end of the preceding century.

The Lettic group comprises the two living dialects of Lithuanian and Lettish spoken by a population of nearly three millions on the south-east coast of the Baltic and in Courland and Covno, and the extinct dialect of Old Prussian once dominant between the Vistula and the Niemen. The latter is only known to us from documents of the fifteenth and sixteenth centuries, the most important being a translation of the German Catechism printed in 1561, and a German-Prussian vocabulary of more than 800 words compiled in the fifteenth century, and lately edited by Nesselmann.[1] Lettish may be described as Lithuanian in a later stage of development, its accentuation, for instance, being invariably on the first syllable and not movable as in Lithuanian. It is usually divided into High and Low Lettish, the last being again subdivided into north-west Kurish or Tahmish, and the Middle dialect on which the common literary language is based. Lithuanian was similarly divided by Schleicher into High and Low, distinguished by the change of *tj* and *dj* into *cz*, and *dż* in the former; but this division has been successfully attacked by Kurschat,[2] who pro-

[1] "Ein deutsch-preussisches Vocabularium aus dem Anfang des 15 Jahrh." (1868). See Pott in the "Beiträge zur vergl. Sprachf.," vi.

[2] "Wörterbuch der Litauischen Sprache," p. viii. (1870).

poses to call the dialect of the extreme south of Prussian Lithuania (the common literary language) High Lithuanian, while a somewhat widely divergent dialect spoken in the north a few miles below Memel might be termed Low Lithuanian. Lithuanian literature consists in large measure of *dainas*, or "national songs," and prose tales, and it also boasts of one poet, Christian Donaleitis (1714-80), whose poem of "The Seasons" in 3,000 lines possesses considerable merit. Lithuanian phonology agrees strikingly in some respects with that of the Indic branch, *sz* (= *sh*) answering to I-E. *k*, Sansk. *'s*, Zend *ç*; *k* to I-E. *kw*, Sk. *ch*, Zend *k*; *ż* (= French *j*) to I-E. *g*, Sk. *j*, Zend *z*; and *g* to I-E. *gw*, Sk. and Zend *g* (*j*). These sounds have undergone further modification in Lettish, where *k* and *g* have become *c* (= *ts*) and *dz* before the soft vowels, as in *celt*, "to lift," Lith. *kélti*, and *sz* and *ż* have become *s* and *z*, as *sirds*, "the heart," Lith. *szirdìs* or *zeme*, "the earth," Lith. *zẽme*. Lithuanian has preserved the dual as well as the various case-endings in the noun and the present and future tenses in the verb. A new perfect and imperfect, however, have come into existence, the latter being a compound tense formed by the help of the auxiliary *to do*.

We must now pass on to another and very important branch of the Aryan family, the Greek, or Hellenic. In no other of the allied languages has the vowel system been developed with such perfection and adapted to the expression of grammatical forms. In fact, the Greek of the historic period is characterized by a sensitive euphony, a plastic clearness, and a logical consistency. It is difficult to know how far to the north dialects belonging to

the Hellenic stem may have extended: Thessalian was regarded as a rude Æolic dialect, Macedonian was still further removed from classical Greek, and Thracian seems to belong to another stock. At the same time the scanty remains that have been left of the Phrygian language in inscriptions and glosses prove the latter to have been Hellenic, and the Phrygians traced their descent from the Briges or "Freemen" of Thrace. The other Aryan languages of Asia Minor, Mysian, Lydian, and probably Karian, must also, it would appear, be classified as Hellenic. If any trust can be put in the translations proposed by Gompertz for the inscriptions in Cypriote characters on the terra-cotta whorls found by Dr. Schliemann at Hissarlik, a language almost purely Greek would have been spoken in the Troad at an early period. However that may be, within Greece itself and the islands and colonies adjacent three main dialects were considered to exist—Doric, Ionic, and Æolic. Doric was spread over the Peloponnesus, Megara, Crete, Rhodes, and the colonies of Sicily, Libya, and Southern Italy. The Doric "accent" was especially strong in Laconia. Ionic must be divided into Old Ionic, New Ionic, and Attic, and while Doric was pre-eminently the dialect of landsmen and mountaineers, Ionic was the dialect of sailors and merchants. Its centre was the Ægean, on either side of which it was spoken in Attica and Ionia, where there were four local varieties according to Herodotus.[1] Old Ionic has been preserved in many of the forms and phrases of the Homeric poems, and is distinguished from New Ionic by its more archaic cha-

[1] i. 142.

racter, preserving the primitive long vowels for instance, which become short in New Ionic, as in νέος instead of νᾶος (= *nâvas*), or the old genitive termination in -οιο, which subsequently passed through -οο into the contracted -ου. Attic stands midway between Old and New Ionic in the matter of conservative tendencies; thus the loss of the digamma in *nâvas* is compensated by the lengthening of the second vowel (νέως), which is never made short. Æolic was, perhaps, the most widely used of the Greek dialects, and may be classified as Æolic proper, Bœotic, and Thessalian. It was the dialect of Lesbos, Cyprus, Thessaly, Bœotia, Elis, and Arcadia, though the last two are made Doric by Westphal.[1] The form it assumed in Cyprus has recently been disclosed to us by the decipherment of the Cypriote syllabary, and is particularly interesting, its main features being the amalgamation of the article with the initial vowel of the next word and the preservation of the digamma (*v*), which was elsewhere lost early, as well as of the yod (*y*). Besides these dialects there was also an artificial epic dialect, based partly on Old Ionic, partly on New Ionic, and resulting from the recitation of half-modernized epic poems by clans of rhapsodists who frequently used archaic words and forms wrongly or created others by false analogy. The epic dialect of Homer and the other fragments of

[1] "Vergleichende Grammatik der indogermanischen Sprachen," i. p. 48. See, however, Gelbke and Schrader, in Curtius' "Studien," ii. 1, x. (1869, 1878), who show that Arcadian occupies a middle place between Lesbo-Cyprian and Thessalo-Bœotian. Elean must be classed with Arcadian, though after the fifth century B.C. it is much affected by Laconisms, and from the first had a remarkable predilection for the vowel *a*.

the epic cycle, together with that of such later imitators as Apollonius Rhodius, is a kind of tesselated pavement in which the whole history of the poems is reflected. Thus such stray Æolisms as πίσυρες, φὴρ, ζάθεος, αἰσυμνήτης, ἄμυδις, Θερσίτης confirm the tradition that the home of epic verse was in Æolian Smyrna and the neighbourhood of the Trojan plain, whence it was handed on to the Court poets of the Ionian cities. The intermixture of Old and New Ionic forms, the use of the same word now with the digamma and now without, the sporadic appearance of *yod* (as in θεὸς *γώς*), or of a long -ᾱ in the neuter plural, the co-existence of two or three different forms characteristic of successive stages in the growth of the language (as the genitives in -οιο for -οσγο, -οο, and -ου, or the dative plural with and without -ι), are among the many indications of the length of time during which the lays were orally handed down, and so reflected the several changes undergone by the living speech. The false forms, such as ἐείσατο from εἶμι with a digamma, or ἔλαβε and ἔμμαθε with a double consonant, the mistaken meanings attached to words preserved in some ancient formula or epithet, the extension given to an assumed "poetic licence," all show the artificial character which the poetical language gradually assumed. The Atticisms which occur on every page, and caused Aristarchus to consider Homer as an Athenian, as well as words and phrases which seem to belong to the Periklean era, are witnesses to more than one Attic recension after the poems had been transferred to the mainland of Europe. And lastly, the few forms which bear the impress of the Alexandrine age testify to the harmonistic labours of the critics of Alexan-

dria, who sought to remove contradictions and inconsistences by expunging whole passages or introducing trifling corrections. But the epic dialect, such as we have it, was essentially a creation of the Ionian mind; it grew up among the Æolian and Ionic settlers in Asia Minor, who had fled from the Dorian invaders of the Peloponnesus; it recorded their glories and their hatreds, and with the exception of a single line in Odyssey (xix. 177), there is as little trace of the Dorian name as there is of the Dorian dialect.

This Dorian dialect, however, as befitted the idiom of uncorrupted mountaineers, is the most conservative of all the Greek dialects. Thus it preserves the digamma, as well as the primitive dental, which had become a sibilant in the other dialects, as in διδωτι (= διδωσι), τυπτοντι (= τυπτουσι), ϝικατι (= εἴκοσι); while the accent of the aorist ἐτύπον embodies the fact that the last syllable has been shortened by losing a final consonant (ἐτύποντ). Next to Doric, Old Ionic and Attic exhibit the most archaisms. The Homeric and Hesiodic literature bear witness to the comparatively late date at which the digamma became extinct in the Ionic dialect, though only one Ionic inscription with this letter has yet been found (in Naxos), and the legends scratched on the granite colossi of Abu-Simbel by the Ionian mercenaries of Psammitichus (probably B.C. 650) show no sign of its existence. Except in the matter of the digamma, which was retained up to a comparatively late date, Lesbian Æolic has gone furthest in the path of phonetic and grammatical change. Even the accent has been uniformly thrown as far back as possible. However, the

verbs in -μι were more numerous than in the sister-idioms, φίλημι for example answering to the ordinary φιλέω, but most of these are of late formation though modelled after an ancient pattern.

It has been the fashion to class Greek with Latin, and even to constitute a hypothetical Helleno-Italic or "Pelasgic" language from which the dialects of Greece and Italy have been supposed to have sprung. But such a theory is but the echo of the effete prejudices and beliefs of pre-scientific "philology." Greek and Latin were generally the only dead languages taught and known, and where Hebrew did not come into competition it was imagined that everything must be derived from Greek. Not only were the two classical tongues thought to be intimately bound together, but it was further laid down that Latin was but a dialect of Greek, a sort of corrupt Æolic in fact. It is no longer possible to believe that the relation between Greek and Latin is especially close. Latin gravitates rather towards the Keltic languages, where, as in Latin, we find a passive in *-r*, and a future in *-b*, while Greek is much more nearly related to Asiatic Zend. Alone in Greek, Zend, and Sanskrit has the augment been preserved; the comparative in -τερος, the *alpha privative*, the μὴ (*mâ*) prohibitive, and the voiceless aspirate, all find their analogues in Zend; while, as Prof. Max Müller points out, there are striking resemblances between the lexicons of Greek and Zend. Thus the Greek στόμα, πλεῖστος, ἀνά, οἶος, γέρας, θέμις, οἰκονδε answer to the Zend *çtaman*, *fraêsta*, *ana*, *aêva* ("one"), *garañh* ("reverence"), *dâmi* ("creation"), *vaêçmen-da*.[1]

[1] "Chips," iv. p. 249.

On the other hand, Greek stands in marked contrast to Latin as regards phonology. While Greek preserves the vowels, Latin preserves the consonants, and the aspirated tenues, *χ*, *ϑ*, *φ*, become in Latin the simple *h* and *f*. Equally opposed is the verbal conjugation where Latin has dispensed with a large number of the old tenses and supplied their place with new compounds. By way of compensation the Greek declension is poorer than the Latin, in spite of its retention of the dual and use of the archaic endings -*ϑε(ν)* and -*δε*.

The loss of consonants, *ϝ*, *y*, *s*, &c., has been the chief cause of the phonetic changes of the Greek language. The rule that drops *s* between two vowels has been especially prolific of change. So also has been the disappearance of *y*, which, when coming after a dental, has given rise to *z*. The grammatical terminations, again, have been strangely transformed by the rule which forbids a word to end in any consonant save *n*, *r*, *s* (and in two cases *k*). The decay of the final consonants was, however, but slow, and the late date at which the final nasal of the accusative disappeared may be judged of by the preservation of the vowel *a*, as in *φέροντα*, a nasal preventing any modification of a preceding *alpha*. In the declension, the locative has taken the place of the dative, as *ποίμεν-ι*, *ναῦ-σι*, *πόσ-σι* (= *πόδ-σι*),[1] and the instrumental ending is preserved in the Homeric *ναῦ-φι(ν)*. In the verb the old middle or intransitive voice has been retained, which has been lost in Keltic and Letto-Slavonic, and has left but few traces in Latin. Though

[1] -*σι* is a compound of the two locative endings -*su* and -*i*, and stands for *sui*.

capable in an eminent degree of forming compounds, Greek has remained free in this respect from the extravagances of Sanskrit, and its syntax has reached a high level of development.

Political and literary reasons made Attic the standard dialect of Greece, and in the hands of the Alexandrian writers it became the κοινὴ διάλεκτος, or "common language," of the Greek world. But outside the literary coterie and such University cities as Athens or Alexandria, this "common language" changed considerably, and we have only to compare the Greek of the New Testament with that of Plato or Thucydides to see how great the change could be. The transference of the capital of the Roman Empire to Constantinople, and the mixture of nationalities which took place there, gradually produced the Byzantine Greek of the Middle Ages, out of which grew modern Greek or Romaic, properly applied to the educated dialect of Greece at the time of the war of independence. By the side of this stood a large number of local varieties, amounting, it is said, to as many as seventy,[1] one especially, the Tzakonian of the Morea, differing from the literary language in a very marked degree.[2] Some of these dialects have now disappeared, but several still remain, especially in the islands, and to such an extent does dialectic variation still proceed that in Lesbos "villages distant from each other not

[1] Stoddart: "Glossology," p. 33. But see above, p. 204.

[2] An exhaustive grammar and vocabulary of this dialect, in three volumes, is being prepared by Dr. Deffner. The vocabulary will contain 6,000 words, with examples. Many of the words and phonetic peculiarities of the dialect go back to the "Laconisms" recorded by Hesychius and other ancient lexicographers.

more than two or three hours have frequently peculiar words of their own and their own peculiar pronunciation."[1] The educated dialect, however, was but slightly removed from the Attic Greek of classical times, and the leaders of Greek literary fashion have found it possible with the aid of schools and newspapers to weed "Romaic" of modern forms and idioms, to restore old cases, tenses and words, and in short to revive classical Greek. This revival is one of the most curious linguistic facts of the present century; even the dative has been recovered, and the infinitive in -ειν is being substituted for the periphrastic νά (= ἵνα) with the conjunctive, which had long taken its place. The conjugation, nevertheless, still displays an analytic tendency, the dual has disappeared, and the pitch-accent has been changed into a stress-accent, causing the accented syllable to be long and the unaccented one to be short. Modern Greek pronunciation, moreover, is very far removed from that of classical times; *iotacismus* is predominant, reducing vowels and diphthongs to the common sound of *i*, while the aspirated consonants have become surds.[2]

One group of Aryan speech is still left for notice. The numerous Romanic tongues which trace their descent from the language of Rome make the Italic group one of special importance. These tongues not only have a continuous history of their own, but we can also trace them

[1] Max Müller: "Lectures," i. p. 52 (8th edition).

[2] A Greek dialect is spoken in eight small towns in the neighbourhood of Otranto and Lecce. It changes χ into *h*, as in *homa* or *huma* for χῶμα, reminding us of the replacement of the guttural aspirate by the simple aspirate in Latin. See Morosi: "Studij sui Dialetti Greci della terra a' Otranto" (1870).

back to a well-known fountain-head. They enable us to verify or correct our attempts to restore the parent-Aryan by a comparison of the derived languages, as well as to study the laws of letter-change in actual, living speech. But Latin, the language of Rome, was but one out of many Italic dialects. Putting aside the non-Aryan Etruscan, we find in Italy two great stocks, the Iapygian and the Latino-Sabellian. The Iapygian is represented by the inscriptions of the ancient Messapia in the south, which are as yet but partially deciphered. They suffice to show, however, how distinct their language is from the other Aryan dialects of Italy; the genitives in *-aihi* and *-ihi*, the use of aspirated consonants, and the avoidance of *m* and *t* at the end of words, connect it rather with the Greek than with the true Italic stock. The latter falls into two branches, the Latin and the Umbro-Samnite, comprising the idioms of the Umbrians, Sabines, Marsians, Volscians, and Samnites or Oscans. Oscan, which is chiefly known to us from the inscriptions on the bronze tablets of Agnone[1] and Bantia,[2] and the Abella Stone,[3] was spoken in Samnium and Campania, and is, on the whole, the most conservative of the Italic dialects; while Umbrian, on the other hand, the language of the north, has suffered more than any other from the action of phonetic decay. Our knowledge of Umbrian is principally derived from the bronze tablets known as the Eugubine Tables, discovered at Gubbio, the ancient

[1] Found at Fonte di Romito in 1848.

[2] Found at Oppido, on the borders of Lucania, in 1793.

[3] Used as a doorstep till noticed by Prof. Remondini in 1740, and removed to the museum of Nola.

Iguvium, in 1446, in a subterranean chamber. They relate to the twelve sacrifices and liturgies to be performed in honour of the twelve gods by various guilds. Both Umbrian and Oscan differ from Latin in substituting *p* for *qu* (*kw*), as in *pis* for *quis*, in replacing *k* before *t* by a strongly pronounced aspirate, as in *Ohtavis* for *Octavius*, and in changing aspirated tenues to *f* in the middle of a word where Latin has *b*, as in *tefe* (*tibi*), *sifei* (*sibi*). Umbrian also developed a peculiar *r* out of an original *d*, and invented a new character to denote it; thus *runum* answers to the Latin *donum; ṛeṛe* to the Latin *dedit*. It tended to omit vowels altogether, and to reduce diphthongs to simple vowels even more than Latin, while the terminations fell into the utmost disorder. Oscan, on the contrary, preserves the diphthongs and retains the organic *a* where Latin has *i*, as in *anter* by the side of the Latin *inter;* it avoids the change of *s* to *r* between vowels, as well as the assimilation of sounds; *kenstur*, for instance, corresponds with the Latin *censor* for *cens-tor*. Both in Oscan and Umbrian the genitive of nouns in *-a* is *-as*, that of nouns in *-us*, *-eis* and *-es*, while the locative is retained, and the dative plural in *-bus* discarded. Much use, too, is made of the old infinitive in *-um*, and whereas the Latin future has had recourse to the auxiliary *fuo*, the Oscan *her-est*, "he will take," preserves the old sigmatic form. As Mommsen observes, the relation between Latin and Osco-Umbrian may be compared to that between Ionic and Doric, Oscan and Umbrian differing from one another much as the Doric of Sicily differed from the Doric of Sparta. But whether Latin, Oscan, or Umbrian, all the Italic

languages agreed in throwing back the accent as far as possible, and thus losing all trace of the primitive Aryan accentuation.

The history of Latin itself may be grouped into three periods,—that of Old Latin, down to the Second Punic war; that of classical Latin, which gradually became the artificial dialect of a select literary coterie; and that of Neo-Latin, the language of the people under the Empire, out of which sprang the Romanic idioms of mediæval and modern Europe. Classical Latin broke down the diphthongs into simple vowels (*jus* for *jous*, *unus* for *oinus*, *plures* for *ploieres*, *civis* for *ceivis*), reduced short *ŭ* to *i* (*optimus* for *optŭmus*, *regimus* for *regŭmus*), changed *o* to *e* (*verto* for *vorto*) and *e* to *i* (*navem* for *navim*), and extended the transformation of *s* into *r* (*arbor* for *arbos*), and of initial *f* into *h* (*hordeum* for *fordeum*). *D* occasionally appears as *l*, as in *lacrima* for *dacrŭma*, *odor* for *olor* (*olere*), and initial *dv* becomes simply *b* (*bonus*, *bis* for *duonus*, *dvis*). The old ablative in *-d*, which long kept its place in official documents, lost its characteristic consonant, and *sententiad* or *oquoltod* had to become *scntentia* and *occulto*, the locatives in *-i* (*humi*, *Romai*) were confounded with the ablative or the genitive, and the old dative in *ê* (*-î*) as in *populoi*, *Romaî*, or *ceivei*, was worn away to *populo*, *Romae*, *civi*. The only traces of the dual are to be found in *duo*, *octo*, and *ambo*, and of the first person-ending of the present active in *sum* (*possum*) and *inquam*. The verb, in fact, was thoroughly disorganized, new analytic tenses were introduced, formed by the help of auxiliaries, the middle voice almost wholly disappeared, and a great extension of use

was given to the supines and gerunds. Here and there, it is true, a reduplicated perfect was left; but its place was more usually taken by a new compound of the stem with the substantive verbs *sum* and *fuo*, as in *scrip-si* and *ama-vi* (*ama-fui*), and this compound was again combined with a compound tense of the substantive verb—as *scripsissem* (= *scrip-si-es-sem*) or *amav-issem*—to form fresh tenses. Other tenses—the imperfect and future—were created by means of the auxiliary *fuo*, just as in Keltic, where the Old Irish *carub* answers to *amabit*, and confutes the view first started by Scherer,[1] that the formative of Latin tenses was the stem *dha* (as in the Teutonic *lov-(d)ed*), since a Keltic *b* cannot come from an earlier *dh*. Like Keltic, too, Latin developed a curious passive in *r*, which was long considered as a reflective voice formed by the pronoun *se*, just as in Letto-Slavic, where the Lithuanian *dẏvy-jŭ-s*, the Church Slavonic *divlja-se* answers to the Latin "miror," or in Old Norse where the middle is formed by the suffix *-sk*, that is, the reflective pronoun *sik*, "self." But though we might bring the Latin *amor* from *amo-se* through an intermediate *amo-re*, it is impossible to do so in Old Irish or Welsh, where *s* does not change to *r*, and for the present, therefore, the origin of the characteristic of the Latin passive must remain unexplained.[2] Several tenses of the

[1] "Geschichte der deutschen Sprache," p. 202.

[2] The Latin passive *r* appears also in Vedic forms, like the 3rd pl. imper. active *'se-r-atam*, from *'si*, and Fick and Bezzenberger suggest that it is further found in the Greek δεῦ-ρ-ο, a 2nd sing. imperative, as compared with the plural δεῦτε (Bezzenberger's "Beiträge," ii. 3, p. 270). In *amaris*, for *ama-r-is*, it is suffixed to the verbal stem, and not to the person-endings, as in the Sanskrit and

passive, however, were formed upon the analytic principle, the substantive verb being used with the participle active, while in both active and passive the optative and conjunctive and even future were confounded together.

The analytic tendency displayed in the Latin verb has been carried out in the Neo-Latin or Romance languages. The "vulgar" Latin of the people necessarily differed slightly in the different parts of the Empire; the further removed a province was from the capital, the greater was the chance of change in the dialect spoken in it, and the greater also the influence likely to be exercised upon it by neighbouring languages.[1] Out of these varieties of provincial Latin have grown the modern Romance idioms—Italian, Spanish, Provençal, French, Portuguese, Rumansch and Wallachian or Rumanian. They all agree in one point, that of retaining the accented syllable of the Latin word, but while Italian and Spanish, geographically the nearest to the old language of Rome, have made but few changes in the form of the vocabulary, French has distinguished itself by the desire it has shown of throwing away as many unaccented syllables as possible, and of thus suppressing vowels and consonants alike. No doubt the process was aided by the Frankish conquest; numberless Teutonic words have made their way into the French dictionary, and French idiom has been largely affected by that of Germany. Thus the French *avenir*, that is, *ad venire*, has been formed after

Greek words just mentioned, and it is possible that the attachment of it to the full forms of the indicative, in order to denote the passive, was due to the false analogy of the imperative *ama-re*.

[1] See Schuchardt: "Der Vokalismus der Vulgärlateins" (1866-8).

the analogy of the German *zukunft*, literally "to come;" *contrée*, that is (*terra*) *contrata*, is the result of the association of the German *Gegend*, "country," and *gegen*, "against," and *avaler*, from *ad vallem*, is a slavish translation of *zu Thal*. But there is another respect in which French and Provençal separate themselves from Italian and Spanish. The declension in the two latter tongues has altogether disappeared in the earliest monuments to which we have access, whereas in French and Provençal the relics of the old declension were preserved up to the thirteenth century, resulting, as M. Littré has remarked,[1] in a semi-synthetic syntax. Old French distinguished between the nominative and the accusative, which were *li chevals* and *le cheval* in the singular, and *li cheval* and *les chevals* in the plural, where the final *-s* preserves the *-us* and *-os* of the Latin noun. French and Provençal, however, are not the children of a common Neo-Latin language. They are independent dialects which have grown up on Gallic soil out of the provincial Latin once spoken there, and modified by the influence of foreign tongues. Both dialects, it is true, supplanted an earlier Keltic idiom, but the number of Keltic words that have crept into their vocabularies is singularly small.

Latin, as spoken in Gaul, had a strong affection for diminutives, a characteristic which may have been of Keltic origin. At all events, Irish shows this tendency in a marked way, as in *sanctan*, "saint-ikin," corrupted into "St. Anne," or *squireen*, from the borrowed *squire*. The same tendency, however, is found in a good number of languages in which the Court dialect has become that of

[1] "Dictionnaire de la Langue française," i. p. xlvii. (1863).

the people, and we have the German Swiss turning everything into a diminutive, down to *Kaisar Karli*, and the Italian using *sorella* as a substitute for *soror*. Indeed, we have only to look at Diez's Dictionary to see how fond the provincials must have been of diminutives throughout the Roman world. We also find them making great use of neuter adjectives, like *viaticum* (*voyage*), or *ætaticum* (*âge*), instead of the simple substantives, and employing words different from those in ordinary use in the classical speech. Thus *villa* (*ville*) took the place of *urbs*, *bucca* (*bouche*) that of *os*, *basiare* (*baiser*) that of *osculari*, *cambiare* (*changer*) that of *mutare*, *andare* (*aller*) that of *ire*. Had it not been for a few lines of Horace and Juvenal we should never have known of the existence of *caballus* in literary Latin of the golden age, and yet *caballus* (*cheval*) has entirely ousted *equus* from the languages which boast of their descent from it. In the eighth century French was still the *lingua romana rustica* in which the clergy preached, and the glosses found by Holtzmann (in 1863) at Reichenau in a MS. of the year 768, present us with words like *cabanna*, *linciolo*, *manatces* as the equivalents of the Latin *tugurium*, *sindones*, *minas*. The oaths of Strassburg (A.D. 842) preserved by Nithard[1] are the next oldest specimens of French, the *langue d'oïl* as it came to be called. With the *Cantilène de Sainte Eulalie* begins the golden age of the Old French tongue, and of the epic poetry, the best example of which is the Chanson de Roland. It was with snatches from this poem that the *trouvère* Taillefer encouraged the Norman soldiers at the battle of Hastings. With the Sire de Joinville the

[1] "Historiarum," iii. 5 (edit. Pertz, 1839).

language entered upon a new stage of development. The *langue d'oïl* had four principal dialects, corresponding with the principal political centres, and still preserved in the modern *patois*. These four dialects were the Burgundian, the Norman, the Picard, and the French of the Isle of France, the present representative of which differs scarcely at all from the Burgundian. The three first-named dialects differ chiefly in the vowels, as the following table will show :—

Norman.	Picard.	Burgundian.
e	oi, ai, ie	oi, ai, ei, ie
ei	oi, ai	oi, ei, ai
u	o, ou, eu	o
ui	i, oi, oui	ui, oi, eui, oui.[1]

All three dialects have contributed towards the formation of modern French, *pois* (*poids*) and *attacher* for instance coming from Burgundy, *pescr* and *attaquer* from Normandy and Picardy. The Norman preference for *u* has been perpetuated in the sound indicated by the spelling of such English words as *colour* or *courage*.

Provençal or the *langue d'Oc*, the language of the *troubadours*, is the language of southern France, and includes not only the dialect of Provence proper, but the dialect also of Languedoc, Limousin, Auvergne, Gascony, and part of Dauphiny, to which it is advisable to add further the Catalonian now spoken in Catalonia, Valencia, and the Balearic Islands, and once used throughout the territory of Aragon. Its westernmost sub-dialect, the Gascoun of Bayonne, may still be heard in the village of Anglet.[2] In some respects Provençal throws light on

[1] Burgundian also changes the nasal into *g*, as in *juig*, for *juin*.

[2] For a specimen of this dialect, see "Poésies en Gascoun," by

the grammatical forms of its northern neighbour; thus the origin of the French *dirai*, from *dicere habeo*, is fully shown by the Provençal future *dir vos ai*, "je vous dirai," which also suggests an explanation of the incorporation of the French pronouns. The earliest Provençal poem, the Song of Boëthius, is not older than the tenth century, but the best literature of mediæval Europe grew up with the brilliant but shortlived civilization of Provence, which the Church stamped out by fire and sword. The Albigensian Crusades prevented the Provençal from obtaining the place afterwards held by the more fortunate Italian and French.

The oldest written monuments of Italian do not reach back beyond the twelfth century. In fact, literary Italian was the creation of Dante, who adopted it from the splendid Court of Frederick II., that precursor of the Renaissance, in whom the Papacy instinctively felt that it had a deadly foe. Already Frederick himself and his Chancellor, Pietro della Vigna, had composed their poems in it, and from the mouth of Dante it passed to his Florentine countrymen and became the native tongue of Tuscany. In his treatise "De Vulgari Eloquentiâ," Dante reviews all the dialects of his country, reckoning fourteen in all, and dividing them into Eastern and Western. The more scientific division of modern days arranges them in three groups—northern, central, and southern, the first comprising Genoese, Piedmontese, Venetian, Æmilian and Lombard; the second Tuscan, Roman, and Corsican; and the third, Neapolitan, Calabrian,

P. Th. Lagravère (Bayonne, 1865), and "Poésies Gasconnes," by J. Larrebat (Bayonne, 1868).

Sicilian, and Sardinian. Most of these dialects differ very widely from the classical Italian; Sicilian, for instance, reads like a new language, and in the *Chiaja* of Naples there are few travellers who would recognize the *Piana* of Tuscan speech.

Spanish departs more widely from Latin in both phonology and vocabulary than any other of the Romanic languages, but its grammatical forms are regular, and when once the phonetic rules of the language are known, its similarity to the parent-tongue will strike the most careless student. It is probable that the changes in the phonology may have been due to Arabic influence, as the changes in the vocabulary certainly have been. Spanish has driven Catalonian from Aragon, and is even now making way against Basque in the north; it is peculiarly the dialect of Castile, and the Andalusian of the south differs from it in many respects. The oldest relics of Spanish are scattered through the pages of St. Isidore of Seville, in the seventh century; its earliest text, however, belongs to the middle of the twelfth.

Portuguese, together with Gallician, approaches French in several particulars more nearly than it does Spanish, though on the whole it must be classed with the latter. It has lost the initial *l* of the article, and, in addition to the Arabic words it contains in common with Spanish, it possesses also a number of French words, which it is supposed were introduced under Henry of Burgundy at the close of the eleventh century.

In the isolated valleys of the Rhætian Alps is to be found another Romanic language, the Rhætian, or language of the Grisons, with its two dialects, the Romansch or Ru-

monsh spoken by the Protestants of the Engadine, and the Ladin (Latin) spoken by the Roman Catholics of the Oberland. A religious literature of the sixteenth century exists in Rumonsh, but otherwise the literary productions of the language amount almost to nothing. Ascoli has lately shown[1] that this Rhætian idiom is allied to two others which have been erroneously classed with Italian—the dialect of Friuli used by more than 400,000 persons in Italy on the banks of the Tagliamento, and in Austria as far as Göritz, and the dialect of the Adige in the Austrian Tyrol spoken by about 90,000 people. A few short inscriptions of the twelfth century belong to the dialect of Friuli.

The last remaining of the Neo-Latin tongues is the Wallach or Rumanian of the far east. The Romàni, as they call themselves, derive it from the Latin introduced by the Roman legionaries into Dacia, when the country was made a province by Trajan in A.D. 107. It is spoken in Rumania and Moldavia, as well as in parts of Hungary, Servia, Transylvania, Bessarabia, and even as far south as Thessaly. The Danube divides it into two branches, the northern or Daco-Rumanic, and the southern or Macedo-Rumanic, the latter of which abounds with Albanian and Greek words. Both dialects, however, have borrowed largely from the Slavonic, and it is possible that they may also contain some fragments of the old Dacian vocabulary, of which our only information is derived from the botanical names given by Dioskorides. Mussafia has shown[2] that the Latin vowels have undergone two

[1] "Archivio Glossologico Italiano," i. (1873).
[2] "Zur romänischen Vocalisation" (1868).

main modifications, tonic *e* and *o*, on the one side, becoming the diphthongs *ea* and *oa*; other vowels, on the other side, acquiring a semi-nasal sound. We have already alluded to the postposition of the definite article, as in *omul* (*homo ille*), "the man," which Rumanian shares with the neighbouring Albanian and Bulgarian. The term Wallach, it may be observed, is the German *Walsch* (*Welsh*) or "foreign," a name given to them by their Teutonic neighbours.

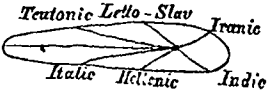
One more language of the Aryan family now remains for review. This is the Skipetár ("Highlander") or Albanian, the linguistic position of which is still unsettled. There is little doubt, however, that it belongs to the Indo-European stock, and the opinion has often been hazarded that it represents the ancient Illyrian or Thrako-Illyrian whose territory it occupies. A recent writer[1] has even connected it with the ancient Pelasgic—that delight of ethnological paradoxers—and sought to explain the early proper names of Greece by means of it; but his attempt cannot be pronounced successful. The vocabulary contains a large number of borrowed words, especially Greek, and certain phænomena seem to indicate that it bears a closer relation to Greek than to any other member of the Aryan family.

This Aryan family of speech was of Asiatic origin. Dr. Latham,[2] indeed, would make it European, and Poesche has lately advocated the same view with great ability;[3] but there are few scholars who have followed

[1] Benlöw: "La Grèce avant les Grecs" (1877).
[2] In his edition of the "Germania" of Tacitus, p. cxxxvii.
[3] "Die Arier" (1878).

them. Their theory rests upon a confusion of language and race. Poesche assumes that the Aryan languages were the product of the white race, whose colour was due to the albinoism caused by a long residence in the marshy country between the Niemen and the Dnieper. But this is begging the whole question. For anything we know, the parent-Aryan may have been the language of a race essentially different from that to which we belong; indeed, it is highly probable that it was spoken by more than one race. We may appeal by way of illustration to the Latin of the fifth century, used as it was by varying nationalities and different races. But comparative philology itself supplies us with a proof of the Asiatic cradle of the Aryan tongue. Linguistic change greatly depends upon geography; the nearer a dialect is to its primary centre, the less alteration we are likely to find in it. Now, of all the Aryan dialects Sanskrit and Zend may, on the whole, be considered to have changed least; while, on the other hand, Keltic in the extreme west has changed most. Hence Pictet made the Aryan mother-country a point within an ellipse, close to Indic and Iranian on the one side, and at varying distances from the languages of Europe on the other.[1] Hovelacque, however, suggests that the point might have been eastward even of the Indic and Iranian groups, and towards the Chinese frontier.[2] This, too, is virtually the view of Johann Schmidt, who derives the several Aryan languages from dialects of the

[1] As in this diagram :



[2] "La Linguistique," p. 344.

parent speech, each of which lay further to the westward of the hypothetical centre the more it had departed from the character of the primitive tongue.[1] Mr. Douse, on the other hand, in tracing the phænomena of Grimm's law back to the original dialects of the parent-speech, would rather make Low German, High German, Letto-Slavic and Classical, the latter including Sanskrit, Zend, Greek, and Latin, merely neighbouring dialects grouped round a single centre, from which we may imagine them to have radiated.[2] In default of other evidence, it is best to abide by the current opinion, which places the primæval Aryan community in Bactriana on the western slopes of Belurtag and Mustag, and near the sources of the Oxus and Jaxartes. Here, at all events, is the *Airyanem vaêjô*, "the Aryan seed," of the first chapter of the Vendidad, where Ahuramazda tells Zarathusta was his first creation, and whence the Aryans advanced towards the south-west through fifteen successive "creations" or countries. It is true that this legend is at most a late tradition, and applies only to the Zoroastrian Persians; the geography, however, is a real and not a mythical one, and the position assigned to the first creation agrees with the little that comparative philology has to teach us about the early Aryan home. Thus we know that it was a comparatively cold region, since the only two trees whose names agree in Eastern and Western Aryan are the birch[3] and the pine,[4] while winter was familiar with its snow and ice.

[1] "Die Verwandschaftverhältnisse der I-E. Sprachen" 1872).
[2] "Grimm's Law; a Study," p. 96 (1876).
[3] Skt. *bhurjja*, Old H. G. *birca*.
[4] Skt. *pîtu-dârus*, Greek πίτυς, Lat. *pinus*.

It was a region, moreover, in which gold, silver, and bronze were procurable, and Gerland[1] has pointed out that the universal Aryan myth embodied in the wanderings of Odysseus presupposes the existence of a large lake or sea near the first dwelling-place of the Indo-European family. But a comparative study of the lexicon proves that though the primitive Aryans were acquainted with salt, crabs and mussels, and boats with rudders, these latter were of a very rude description and only fitted for lakes and rivers, while the absence of a common name for the "oyster" or "the sea" in Eastern and Western Aryan is a fact of some significance. Humboldt believed that the sea of Aral is the remains of a great inland lake which once included the Caspian and the Euxine, and this belief has been confirmed by recent researches.[2] We may therefore picture the tribes which used the parent-Aryan speech as living on the slopes of the Hindu-Kush, in the high central tableland of Asia, and watching the sun as it set evening after evening behind the waters of a great inland sea. It was this inland sea with the desert that lay to the south of it which cut the Aryans off from communication with the civilized races of Elam and Babylonia, and forced the first emigrants to the west to push their way through the steppes of Tatary and the pass of the Ural range. As has been already noticed, the parent-speech was no undivided, uniform tongue; like the provincial Latin that developed into the Romanic languages of modern Europe, it was split up

[1] "Altgriechische Märchen in der Odyssee" (1869).

[2] See Spörer, in Petermann's "Mittheilungen" (1868-72), and "Nature," May 20th, 1875.

into dialects, each with its own peculiarities, which have been perpetuated in the derived idioms, or even associated in the same idiom, like the peculiarities of the Old French dialects in the Parisian French of to-day. Thus M. Bréal[1] observes that while the words which signify "heart" presuppose a stem *ghard* in the languages of Asia, they presuppose a stem *kard* in the languages of Europe, though the compound *'srad-dhâ*, whence the verb *'srad-dadhâmi*, the Latin *crê-do*, shows that the stem *kard* itself is not a stranger to the Asiatic idioms. The variant forms, again, of θύρα and *dvâr*, or the coexistent demonstratives *sa*(s), *ta*(s) testify to the same fact. Artificial language alone is free from dialectical variety, and the older and more barbarous a community the greater will be the number of the dialects it speaks.

No written record has come down to us of this primitive Aryan settlement, where the languages of Europe first began to be formed, it may be, some five or six thousand years ago. But a fuller and truer history of its life and thought than could be given in any written record may be read in the archives of speech. By comparing the dialects of Europe and Asia, we can learn what words were already formed and used before the period of Aryan migration set in. Where we find the same fully-formed word with the same meaning in both Greek and Sanskrit, or German and Zend, we are justified in believing that it existed before the separation of the Aryan family, and that the object or idea it denoted was already familiar to our linguistic forefathers. In this way we can restore

[1] "La Langue indo-européenne," in the "Journal des Savans," Oct. 1876. See above, p. 20. (Vol. II.).

the civilization and history of the parent community, can discover its mode of living, can reproduce its experiences, can trace its habits and beliefs. But we cannot prove a negative: we cannot, that is, infer from the absence of the same word in the same sense in both Eastern and Western Aryan that the idea or object signified was unknown before the period of migration; it might have been known, yet lost or forgotten, during the long years of wandering. Greek and Sanskrit both possess the same term for "razor," *kshuras*, ξυρόν; nevertheless Varro asserts that shaving was not practised at Rome before the third century, B.C.,[1] and the assertion is confirmed not only by the peculiar Latin name of the razor (*novacula*), but also by the fact that the small crescent-shaped razors so plentifully met with in the islands of the Greek archipelago, in Attica, Bœotia, in many parts of Etruria, and even north of the Alps, have never been found in the cemetery of Alba Longa, or in any other of the oldest Italic tombs. Nor, again, must we forget the possibility that words which look of native growth may really have been borrowed, or that borrowed words may exterminate native ones. In Gaelic, *pascha* and *purpura* have become *caisg* and *corcur*, through the analogy of the general law that represents the Kymric *p* by the older *c* (*kw*); and few of those who speak of *pansy* or *dandelion*, remember that they are the borrowed French *pensée* and *dent de lion*. On the other hand, the Basque terms for "knife" are all loan-words—*ganibeta* from the French *canif*, and *nabala* from the Spanish *nabaja* (*novacula*); yet we cannot suppose the Basques to have been ignorant of any

[1] "De Re Rustica," ii. 11.

cutting instruments whatever, and Prince L-L. Bonaparte has discovered the native word *haistoa* in an obscure village. How important these cautions are is evidenced by the fact that Fick, to whom we owe above all others the restoration of the primitive Aryan dictionary and civilization,[1] has from time to time argued as if the absence of a common term in east and west Aryan necessarily implied that a particular object was unknown to the parent-speech, or has accepted words as native because they conform to the phonetic peculiarities of the language, and have undergone the regular action of Grimm's law. Bearing in mind, therefore, that our picture of the primitive Aryan community can never be complete, that we can never know how many further details have still to be filled in, let us see how it comes before us in the pages of Fick's "Comparative Dictionary."

Like the language, the civilization of the community was highly advanced. Man was *manus*, "the thinker," and the society in which he lived was strictly monogamous. The family relations, indeed, were defined with the severest precision, and there were separate words for a wife's sister (*syâlî*), and the wife of a brother (*yâtaras*, εἰνάτερες, *janitrices*). The father, at the head of the family, exercised the same *patria potestas* as we find existing at a later day among the Romans; he was the *patis*, πόσις, or "lord" of the household, just as the wife was the *patnî*, ποτνία, or "mistress." The community itself was but a

[1] In his "Vergleichendes Wörterbuch der indogermanischen Sprachen" (3rd edit. 1875-6), and "Die ehemalige Spracheinheit der Indogermanen Europa's" (1873).

large family, governed on the same principle as the family, by the *vi'spati*, or "head of the clan." The *vi'spati*, again, seems to have been under the *râgan*, or "king," who was assisted by a body of councillors consisting of the *pataras*, or "fathers" of families. The community, however, resembled the Slavonic *mir*, or the village communities of India, whose constitution has been explained to us by Sir Henry Maine. Like the Keltic clan, it was a γένος or *ve'sas* (οἶκος), holding in common the pasturage and other lands, which were redistributed among its members from time to time. These members, nevertheless, had separate possessions of their own (*ap-nas*, ἄφνος, *res*), consisting of the house with its court, its goods, and its cattle. The king or chief, too, had a special residence (*rêgia*) and domain (τέμενος), "cut off" from the property of his neighbours. The house (*damas*) was no mere tent or cave; it was built of wood, with a thatched roof, and was entered by a door, not by the half-underground passage of the Siberians. But the community itself was but part of a larger whole—the *vastu* (ἄστυ),[1] *puris*[2] (πόλις), or "township;" and these townships were connected with one another by roads (*panti*), along which pedlars travelled with the wares of trade. Naturally such an organized community had its settled customs or laws (*dhâmaṇ*, θέμα), like the Homeric θέμιστες, or "dooms," laid down (*dhâ*) by qualified judges, and accepted as precedents for the future. "Justice" was *aiva*, "the path" of right, from *i*, "to go;" right itself was *yaus* (*jus*), that which a man is "bound" to, from *yu(g)*, "to join;" punishment (*kai-na*) was inflicted only after inquiry

[1] Root *vas*, "to dwell." [2] Root *pur* (*ple-o*), "to fill."

(*quæ-rere*), and the accused was called upon to provide sureties, those who "knew" him (*gnâ-tar*). The community contained free men only; slavery as yet did not exist, and free labourers worked for hire (*misdha*, μισθός).

Aryan religion was simple, but, like the community, already organized. It consisted in a worship of natural objects and phænomena, more especially of the sun and dawn, and other bright powers of day. But it must be called henotheistic, rather than polytheistic; out of the many gods he believed in, the worshipper prayed to one only at a time—he had not yet room in his thoughts for two co-existing deities. The gods ruled and guided the universe; they were immortal, all-powerful, and holy, dwelling like a human family on an Olympus of their own with the *dyauspitar* (*Diespater*) or "father of heaven" at their head. Of this father, who was himself but the "bright" sky, the stars and moon were conceived as the sons and daughters;[1] it was not until the old theology had begun to yield to the nature-myths of a later age that they became the myriad eyes of Argos, the "brilliant" one. Of this later mythology, the hymns already addressed to the gods were a fruitful seedplot; they were, too, the basis of a liturgy, fragments of which were carried away by the various bodies of emigrants. In these liturgical forms the gods were praised as "givers of good things" (*dâtaras vasuâm*), were prayed "to show kindness" (*vâram bhar*, ἦρα φέρειν), and asked to bestow "good courage" or "sense" (μένος ἠϋ, Zend *vohu manañh*) and "undying renown" (*śravas akshitam*, κλέος ἄφθιτον). In

[1] Compare the Vedic *duhitar divas* used of the Dawn and other goddesses with the Homeric θυγάτηρ Διός and κούραι Διός αἰγιόχοιο.

addressing them, the worshipper had to face the rising sun, with his right hand to the south; hence the Skt. *dakshiṇa* (*dakshiṇâ*, the *Deccan*), the Welsh *dehau*, and Old Irish *dess*, all mean at once "right hand," and "south;" it is only in the Ghilghiti of Dardistan that the right hand is synonymous with the "north."

But besides these bright and favourable gods, there were the evil spirits of night and darkness, whose symbol, the snake, lurked during the day in the coverts of the woods. Night itself was the demon Aj-dahâka (Astyages, Zohak), "the biting snake," ever contending with daylight for the possession of the world, but ever worsted in the struggle. It was during his hour of apparent victory that ghosts and vampires prowled about, and witchcraft could work its evil will. At such a time, the Aryan felt a consciousness of sin, which he expressed in words like the Sanskrit *agas*, "transgression," Greek ἄγος, "guilt;" and sought for forgiveness in penance and self-mortification (compare the Skt. *'sramana*, "an ascetic," and Irish *cráibdech*, "pious," *craibhdhigh*, "people who mortify the flesh").[1]

Cattle formed the basis of material existence. In the possession of herds and flocks (*paśu*, *pecus*) lay the chief wealth of the Aryan community, which had "sheep-walks" and pasture grounds (*agra*, *ager*), stables and sheep-cotes, fields and pigsties. The horse was domesticated; indeed, it is probable that the horse, which the Accadians of Chaldea called "the animal of the East," was first tamed by the primitive Aryans. It was not, however, used for riding, but only, like the ox, for draw-

[1] Rhŷs: "Lectures on Welsh Philology," p. 13 (1877).

ing carts. The other domesticated animals were oxen, sheep, goats, swine, and dogs; geese and bees were also kept, though beehives were not yet invented, and the honey was made into mead (Skt. *madhu*). But milk from the cow, sheep, and goat was the chief drink; and flesh was eaten when baked or roasted. To eat raw flesh was the sign and characteristic of the barbarians (*âmâdas*, ὠμοφαγοί). Apples also were eaten, and black broth or hodgepodge (Skt. *yûsha*, Lat. *jus*, Greek ζωμός, Old Slav. *jucha*, Welsh *uwd*, from *yu* "to mix") formed a principal staple of food. Leather was tanned, and wool shorn and woven, for though linen was also known it is probable that dresses were mostly made of these materials. The hunter had the bear, wolf, wild duck, hare, otter, and beaver to pursue or trap; crabs and mussels were collected for food, and mice and vermin were already a household plague. Quails and ducks were further eaten, and the future was divined from the flight of birds, especially the falcon.

The Aryans, however, were mainly a pastoral people. Agriculture was still backward, though two cereals at least were grown—one represented by the Skt. *sasya*, Zend *hahya*, "corn," and Welsh *haidd*, "barley;"[1] and the other by the Skt. *yavas*, Lithuanian *javaí*, Greek ζεία, "spelt" (Old Irish *eorna*, "barley"). We may infer that the latter grain was the one most cultivated from the old Homeric epithet of the earth, ζειδώρος, "spelt-giving." A kind of rude plough was in use; hay was cut with the

[1] Rhŷs: "Lectures on Welsh Philology," p. 9 (1877). Dr. Whitley Stokes refers to Pliny N. H. xviii. 40: "Secale Taurini sub Alpibus (*s*)*asiam* vocant."

sickle (*rarva*), and the grain was ground in the mill, and baked into bread. Straw was collected for winter employment, or for roofing the house; and a few garden herbs were grown. Salt, too, was used as an article of food; and the year was divided into the three seasons of spring, summer, and winter, while the moon received the title of "measurer," from the lunar month, by means of which time was reckoned. The dress of the Aryans shows that their country was far from being a warm one. It consisted of tunic, coat, collar, and sandals, made of sewn and woven wool or leather.

Gold, silver, and bronze were the three metals known, though implements of stone still continued in use; and even after their arrival in Europe, we find the Teutonic Aryans naming the "dagger" *seahs*, from the "stone" (Lat. *saxum*) of which it was made. Smelting and forging were carried on by a special class of smiths (*takshanas*), who occupied a high position, as in most primitive communities, and were even sometimes supposed to possess supernatural powers. The axe seems to have been the chief weapon, but the sword (Skt. *asi*, Lat. *ensis*) and bow were also employed; and wars appear to have been frequent.

Surgery and medicine were in their infancy,[1] charms being mainly relied upon as a means of cure; and two diseases at least had received names—the tetter (*dardru*) and consumption (*skaya*, *skiti*). Boats fitted for lakes and rivers had been invented; and the numerals on the decimal system were known, and named, at all events, up to one hundred. Baked, and not merely sun-dried, pot-

[1] Compare Latin *medeor* and Zend. *madhaya*.

tery was in daily use, consisting of vases, jars, pots, and cups, some of which had a pointed end to drive into the ground. Since several words exist denoting painting and motley colours, we may infer that this pottery was sometimes ornamented. Painting, however, was not the only art the germs of which had already shown themselves. Music, too, was already developed; and the Sanskrit *tanti*, "a chord," and *tata*, "a stringed instrument," answer to the Greek τόνος, "a chord," and the Welsh *tant*, "a musical string," plural *tannau*, "a harp."

Even the names by which these old Aryans called one another were organized into a system. Fick has shown[1] that every proper name was a compound of two words, neither more nor less. Thus we might have *Deva-'sruta*, "heard by God," in Sanskrit, Θεό-δωρος in Greek, Hariberht in Old German, Mils-drag in Servian, Cyn-fael in modern Welsh. The number of names, however, by which a child might be christened was limited; and many of them could be doubled by putting the first element last—*Deva-'sruta* for instance, being changed into 'Sruta-deva, Θεό-δωρος into Δωρό-θεος. The second part of the name might be contracted so as to be hardly recognizable; thus in Greek Ἀντί-γονος becomes Ἀντίγων, Κλεσ-πάτηρ Κλῶπας, and Baunack has proved that the Kretan Θίβος stands for Θέσ-βουλος.[2] After the separation of the Aryan family, a good many shorter names were formed out of the old ones by omitting one of their two elements, and using the remaining element by itself, with or without a special termina-

[1] "Die griechischen Personennamen" (1874).

[2] Curtius' "Studien zur griechischen und lateinischen Grammatik," x. 1 (1877), pp. 83-88.

tion, as in the Sanskrit Datta from Deva-datta, or the Greek Νικίας, Νίκων from Νικό-μαχος, Νικό-στρατος, or the like. The Latin proper names fall outside the Aryan system, and are based on an entirely different method, which is probably due to Etruscan influence.[1]

Such, then, was in brief outline the civilization of the early Aryan community, and it will be seen that it was no mean one. Still following Fick, we may trace the Western Aryans after their departure from their old home, making their way along the northern shores of the Caspian and the inhospitable plains of Russia[2] to a region between the Baltic and the Black Sea, but westward of a line drawn from Königsberg to the Crimea, as is shown by the common possession of a name for the beech by the European dialects. Here, it would seem, they settled for a while, before again breaking up and turning now to the west to become Kelts or Teutons, now to the south to become Italians and Greeks. The European dialects have certain marked features in common; such as the possession of *e* and *l*, where the Asiatic dialects have *a* and *r*, and a present-stem formed by the suffix *-ta*. If we compare their vocabularies together we shall gather some idea of the progress that had been made since their separation from their eastern kindred. Family relationships have become more closely defined; there are names now for the grandfather, the sister-in-

[1] At any rate the Latin name-system is the same as the Etruscan, and we now know that certain proper names are of Etruscan origin, Aulus, Aulius, or Avilius, for example, being the Etruscan *Avile* or *Avle*, from *avil*, "life."

[2] See Sayce: "Principles of Comparative Philology" (2nd edition), pp. 387-94.

law, and the sister's son, and terms of affection for old people, such as *anâ* (*anus*), and *amâ* (*amita*), "grandmother," but not, it would appear, for father and mother. An advance may be noted, too, in civil relations; the community now called *tauta* (Goth. *thiuda*) has become more compact, and a conception has been formed of the citizen or "civis," as opposed to the "stranger" or *hostis*. The members of the same community are necessarily friends, but it requires a special act to enter into friendly relations with the member of another community, and be to him a "host" (*hospeš*, Old Slav. *gos-podĭ*). We find a new term for "law," *lex*, A-S. *lagu*, "what is laid down," and there are further words for "pound" and "steal." If the Greek had nothing corresponding to *lex*, *hospes*, *hostis*, *civis*, it is not that he lacked the ideas denoted by these words, or had separated earlier than the rest of his European brethren from the old stock, but because his intercourse with the east and his maritime pursuits kept the relations of civil life in a constant state of mobility, and displaced old terms by new ones, such as βασιλεύς, φάναξ, θεός, ἱερεύς. But it was their introduction to the sea that brought the European Aryans their largest increase of knowledge and experience. Not only were better boats built, and the sea itself named from its "barren" nature (*mari*), but sea animals—such as the lobster, the oyster, and the seal—were caught and named. New plants on the land, too, became known—the elm, the alder, the hazel, the oak, the Scotch fir, the vine, the willow, the beech, and the nettle, as well as new animals—the stag, the lynx, the hedgehog, and the tortoise, and new birds —the thrush and the crane. The duck, perhaps, was

added to the list of domesticated animals, and a great improvement took place in agriculture, the old pastoral life passing into an agricultural one. We now have cultivated fields, with millet (μελίνη), barley (κριθή, *hordeum*), oats (*avena*), and rye (Old Slav. *pyro*); forks, seed-sowing, harvesting, and harrowing. Peas, beans, poppies, rape, onions, and possibly hemp were also grown, and, as Fick acutely remarks, bread of an inferior sort was baked, which afterwards gave way to better sorts, and so occasioned the loss of its common European name. Yeast, too, made its appearance, together with glue and pitch; leather work was improved; hurdles and wicker-work began to be made, and the stock of tools and weapons was enlarged by the addition of hammers and knives, shields, spears, and lances.

It was left to each branch of the European family to improve upon the heritage it had received. The dictionary of every separate language is filled with words of peculiar form and meaning, bearing witness to the extent to which this improvement was carried out. In Greek, for instance, we find new terms in abundance. Even the deity has received a fresh name, since in spite of every effort that has been made to connect the Greek θεός with the common Aryan term that we meet with in the Latin *deus*, it still stands obstinately alone, and favours the view of Herodotus and Rödiger[1] that the Greek looked upon his gods as "the placers" or "creators" of that divinely arranged universe to which he afterwards gave the name of κοσμὸς or "order." With the Greek, too, individualism reached its highest point;

[1] Kuhn's "Zeitschrift," xvi. pp. 158, *sq.*

oriental monarchy and Hellenic despotism were not far removed from one another, and consequently we need not be surprised at finding such peculiar Greek words as *βασιλεύς*, *ϝάναξ*, and *τύραννος*, or that *τύραννος* was of Asiatic origin, and *ϝάναξ* the title of the Phrygian kings. Strength and holiness, again, seemed to the Greek closely allied, and *ἱερός* (Skt. *ishiras*), which still retains its old meaning of "strong" in such Homeric formulæ as *ἱερὸν μένος*, came to signify "sacred," and so gave a name to the sacrificing priest. The Athenian *δῆμος* goes back to the root *dâ*, "to divide," and bears witness to a time when there was still a communal division of land among the Ionians, while the *ἀγορά* and *ἡλιαία* (*ἀλία*) were the invention of a race which laid special emphasis on the gift of eloquence. *Νόμος*, "law," may indeed be older than the Hellenic age, but in its extension to denote the common thought of men (*ἰθμίζω*) or the currency ordained by custom (*νόμισμα*), it is certainly altogether Greek. Nor did the Greek pantheon and mythology escape the influence of the Semitic stranger. Aphrodite is as much Phœnician as Indo-European in her attributes, and the myth of Adonis has now been tracked back to the epics of primæval Babylonia.

It is obvious, however, that we cannot be too careful in determining the relative amount of civilization possessed by the fragments of the Aryan family as they successively broke off from the larger community. We may find a particular word, for instance, common to all the European dialects, and not occurring in the Asiatic ones; and yet this need not prove that it was unknown before the westward emigration, since the Eastern Aryans

may have once had it, but displaced it subsequently by another word. On the other hand, as Ascoli has observed,[1] a derivative of the same form and meaning may develop independently in two distinct languages. Are we to suppose that the Sanskrit *ad-ana-m* and Greek *ἐδ-ανό-ν* go back to the period of Indo-European unity or sprang up independently in the two idioms, or that the Sanskrit *a-swapna-s*, the Greek *ἄ-υπνο-ς*, and the Latin *in-somnis* could not have been formed independently in all three tongues? We may easily go too far in our attempt to restore the past history and civilization of a group of languages, and forget the possibilities of which the strict method of science bids us take account.

The reconstruction of the history of Aryan grammar is a safer task than the reconstruction of the history of its civilization. The same root may yield a derivative of the same form and meaning in two languages independently; but we are justified in holding that this could never be the case with grammatical forms. If we find *asmi* in Sanskrit and *esmi* in Lithuanian serving to express the first person singular of the present tense of the substantive verb, the reason must be that they are both relics of a time when the ancestors of the Hindus and the Lithuanians lived together, and spoke a common tongue. Now, just as a comparison of words has enabled us to sketch the history of Aryan civilization, so, too, a comparison of grammatical forms will enable us to sketch the history of Aryan grammar.

It has been pointed out in a former chapter that Aryan accent originally fell mostly on the last syllable, or rather

[1] "Studij critici," ii. p. 10.

on the element which denoted the place occupied by a word in a sentence. As in course of time the accent was thrown back, these final syllables, the symbols of flection, became affected by phonetic decay, and tended to disappear. The more modern an Aryan language is, the less traces does it exhibit of flection; what was once synthetic becomes analytic. The parent-Aryan was a highly inflected tongue; its later history and modifications are a record of a perpetual loss of flection and the growth of other modes of grammatical expression. The primitive noun possessed a number of different cases and case-terminations, which came, however, to be limited now to one, now to another case. The same case could be denoted by different terminations; the genitive, for instance, was represented by at least three forms, *-sya* (as in the Sanskrit *śiva-sya*, Homeric δημο(σ)ιο), *-as*, *-is*, *-os* (as in μούσας, *generis*) and *-i* (as in *domini*). A large number of Sanskrit nouns have eight cases with different terminations in the singular, three in the dual, and six in the plural; of these Latin preserves only six (and with the locative seven), while Greek reduces them to five, though the latter language makes occasional use of other old cases in *-θεν* and *-δε*, which must have existed in the parent-speech, though scanty traces of them are left in the sister-dialects. The six Latin cases were still further diminished in course of time in some of the declensions; owing to the loss of the final dental of the ablative, the dative and ablative singular came to coincide in the second declension, while a similar confusion was occasioned between the genitive and dative in the first declension. So, too, in certain Sanskrit nouns the geni-

tive and ablative singular assumed the same form, while, as we have seen, only two out of the six Latin cases survived in Old French, and even these have disappeared in the modern language. In Sanskrit, again, the meanings of the cases interchange to a large extent, and Prof. Ludwig has sought to trace the origin of this confusion, or rather indefiniteness, of sense to the Rig-Veda. Price or value is denoted by the instrumental in Sanskrit, by the locative and ablative in Latin, and by the genitive in Greek and Lithuanian; the moment of time at which an event happens by the instrumental or locative in Sanskrit, by the dative in Greek, by the ablative in Latin, and by the locative in Lithuanian; while the absolute construction is expressed in Latin by the ablative; in Sanskrit by the locative, genitive, and ablative; in Greek by the genitive; in Lithuanian and Old English by the dative, and in modern English by the nominative. The same grammatical relation may be regarded from different points of view according to its position in the sentence; and hence the fluidity of signification which we seem to find in the cases of the primitive Aryan speech, as well as the number of terminations or flections by which they were symbolized.

Modern research has confirmed the reality of the distinction drawn by the Sanskrit grammarians between the strong and the weak cases, the strong cases being the nominative, accusative, and vocative. The nominative, symbolized by the suffix, represented the subject whether active or passive, no distinction being made between the two cases as in some languages, the Eskimaux for example. Here a noun receives a "subjective

affix" if it denotes the possessor and the agent, a neutral affix if it is followed by an intransitive verb. Thus *tckhiania-p takuvā* is "the fox saw him," *tckhiania-q takuvā*, "the fox was seen by him." The suffix *-s*, however, was mostly confined to masculine nouns; feminines were provided with other suffixes, and neuters were really objective cases without any proper nominative. The accusative, marked by *-m* (and *-as*), expressed the object towards which the action of the verb travels, and wherein it finds rest; and since there might sometimes be a double resting-point, that is to say a double object, we find verbs used with two accusatives. Thus the Greek might say διδάσκω τὴν μουσικήν σε, which we can translate, without change of syntax, "I teach you music." Hence the use of the so-called accusative of limitation, as in δεδεμένος τούς πόδας, "os humerosque deo similis," so absurdly explained by classical "philologists" as dependent on κατὰ or *secundum* "understood," the true explanation being that the accusative is here the final object by which the movement of the thought is limited. Hence, too, the "accusative of motion," the end or place towards which the action is directed being naturally expressed by the objective case. Both nominative and accusative were primarily abstracts, masculines in *-s* alone excepted, and their formatives continued to mark abstracts to the last.[1] The vocative was the mere stem, or more properly the noun deprived of the *-s* of the nominative, and with its accent withdrawn from its final syllable.[2]

[1] See above, p. 413.

[2] This frequently resulted in shortening the termination, *e. g.* νύμφᾰ, δέσποτᾰ, or in thinning the vowel, *e. g.* ἵππε from ἵππο-. Cases

The reason of this was twofold; in raising the voice to call another, the accent falls rather on the beginning than on the end of a word, and where there was no suffix there was no necessity for accentuating the last syllable. It was only the confused linguistic instinct of later days that employed the nominative for the vocative as in φύλαξ, but how easy the transition was may be seen from such passages as: "Equitem, Messapus, in armis Et cum fratre Coras, latis diffundite campis,"[1] or "Semper celebrabere donis, Corniger Hesperidum fluvius regnator aquarum."[2]

Among the weak cases the genitive is the most important. We saw, when we were dealing with the morphology of speech, how it has grown out of an adjective used adverbially, that is to say, as a crystallized case, though it is true that it is difficult to explain the genitives in *-as* and *-i*. According to Prof. Friedrich Müller,[3] the genitive is symbolized by the vowel, not by the sibilant, *vâk-a-sa* (*vocis*) being the original genitive in contradistinction to the nominative *vâk-sa* (*vox*). Certainly the suffix of the genitive plural *-âm* (=*a*+*am*) shows no sign of the sibilant, which only appears (in *-sâm*) where the genitive singular ends in *-sya*; but it must be remembered that we have no proof that either the genitive *-as* or the nominative *-s* was ever followed by a vowel. In the partitive use of the genitive, as it is termed, the genitive merely expresses

like *ἄνα* for *ἄνακτ*, *παῖ* for *παῖδ*, are due to the Greek rule of not ending a word with any consonants except semi-vowels.

[1] Verg. Æn. xi. 464.

[2] Verg. Æn. viii. 77.

[3] "Grundriss d. Sprachwissenschaft," i. p. 119 (1876).

the relation between the whole and the part; what that relation is, is left to be supplied by the mind. The genitive is really an attributive case, being to the substantive what the object is to the verb, defining its meaning and limiting its application. Hence its employment in Greek with verbs of feeling, hearing, and the like, where it denotes the part of which there is perception.

The dative seems to imply primarily a reference of one object to another, just as the ablative implies the removal of one object from another; the locative its indwelling in another, and the instrumental its employment through another. All these cases, therefore, would have originally been local in their application; their temporal and modal uses being derivative and later.[1] The dative expresses the second or further object towards which the body inclines; hence we find it denoting the "remoter object," as well as the person interested in the fact stated. The "ethical dative," in short, over which grammarians have expended so much needless admiration, merely represents another person viewed as a second object. If the Roman said *noces tibi*, *irascor tibi*, it was only because the person addressed was the further object of thought to whom the first object, "hurt" or "anger," was extended. The dative is thus an attribute of an attribute, standing in the same relation to the object that the object does to the verb, or the genitive to the substantive. In Greek it has become confounded with other cases, the locative and the instrumental, but in Latin it has fairly maintained its separate individuality, though the progress of decay has caused it to amalga-

[1] See Hübschmann: "Zur Casuslehre" (1875), pp. 131, *sq.*

mate with the genitive singular and ablative plural of the first declension, and with the ablative singular and plural of the second and third. In this respect Latin resembles Vedic Sanskrit in contrast with the classical Sanskrit of a later period, both Latin and Vedic Sanskrit using the dative to express the purpose of an action, that towards which we look when doing it. We may say "exitio est mare nautis," since *nautis* is the "ethical" dative dependent on *exitio*, and *exitio* is the final result of the sea so far as sailors are concerned. It is noticeable that none of the other Aryan languages employ the dative in this way. In the infinitive, again, we have a crystallized dative, not a locative, as has been sometimes asserted. The Vedic *dâváne*, "for giving," "to give," answers to the Greek δοῦναι (δοϝεναι), *jeshe*, "to conquer," to κῶσαι, *vayodhai*, "to live," for *váyas-dhai*, to ϝεύδεσ-θαι, just as *jîv-áse* does to the Latin *amare* (*ama-se*), where the final vowel was once long, as in *fieri* (*fiesei*).[1] Our own analytic infinitive "to give," is but a translation of the Anglo-Saxon dative *gifanne* ("dare"), whence the Old English form is *-en* or *-an*, which came to be spelt *-ing* or *-inge* in the fifteenth century, and so to be confounded with the present participle in *-ing* for an earlier *-ende*, as well as with nouns in *-ung*, which afterwards became *-ing*. Modern English also lets us see how readily a case can lose all its real relation to the rest of the sentence and be crystallized into an "absolute" form. We say "*to* err is human," with as little compunction or recollection of the original meaning of the preposition as the old Roman had of the primitive force of "erra*re* est

[1] Max Müller: "Chips," iv. pp. 49-63.

humanum." In Greek the infinitive can even be declined with the article through all the cases of the noun. The dative, however, was by no means the only case which was hardened and stereotyped into an infinitive or verbal noun. Thus we have the accusative, as in the Sanskrit *dâtum*, "to give," Vedic *yâmqm*, "to get," identical with the Latin supine; the instrumental, as in the Vedic *vidmánâ*, "by knowledge," the genitive, ablative, and locative, as in the Vedic *vilikhas*, "to draw," *âtŗídas*, "to strike," *dŗíší*, "to shine," and even the bare stem formed by the suffixes *-man* or *-van*. The latter is the source of the common Greek infinitive of the present active, φέρειν, when compared with the Æolic φέρην, and Doric φέρεν, pointing to an original φερε-(ϝ)εν.[1] Hence the nineteen Homeric aorist infinitives in -έειν, like πιέειν, εἰσιδέειν, are formed by false analogy from contracted verbs in -έω, and indicate a late and artificial stage of language. From the suffix *-man* come the Homeric infinitives in -μεν, found only, however, after a short vowel with the single exception of ζευγνῦμεν, as well as the ten aorist infinitives which terminate in -εμεν.

The locative was distinguished from the dative by a lighter ending, οἴκοι in Greek instead of οἴκῳι, *ruri*, *Romā-ī* in Latin instead of *patrei*, *Romāi-ei*. So in Sanskrit we find *navi*, "in a ship," instead of *nave*, "to a ship," *'sive* (*'siva+i*) instead of *'sivâya*, though feminine bases in *-a* have another locative ending in *-âm*, which Dr. F. Müller would derive from an earlier *-ans* (as in the pronoun *ta-sm-is* for *ta-sm-ins*), and that again from *-ant*. The loss of the locative or its confusion with other cases

[1] Curtius: "Das Verbum," ii. p. 110.

in so many Aryan dialects, is but an illustration of the progress language is ever making from the material to the more abstract; the idea of space tends continually to be supplanted by those of time and manner.

The ablative is found with more than one termination, *-as*, *-dhas* (as in the Greek οὐρανό-θε[ν]), *-tas* (Latin *cœli-tus*), and *-ad* or *-d*, the last being the most common. The dental was long in disappearing from Latin; *gnaivod* occurs on the tombs of the Scipios, and legal documents embodying old formulæ, and the adverb *antidhac* (*ante hac*) bore witness to its former existence. A considerable number of the adverbs and adverbial prepositions, indeed, were merely old ablatives; *facillumed* is found in the senatorial decree concerning the Bacchanalian orgies, and the Greek ταχέως or ὦς stand for ταχέωτ and *yât* (or *kwât*). The so-called accusatives of the personal pronouns, *med*, *ted*, *scd*, which are met with in Old Latin, have been shown by Prof. Max Müller to be really bases, which reappear in the Sanskrit *mat-tas*, *twat-tas*.[1] The ablative disappeared at an early period from the Teutonic idioms as in Greek; in Latin it took the place of the instrumental, and denoted the instrument or agent, though *ab* was generally employed where living persons were referred to. This instrumental use was easily derived from its employment to express *origin*, a secondary sense which grew out of its first signification of removal from a place or object, but which caused it to be supplanted in Greek by the genitive. From its instrumental use came its employment to represent the

[1] Fleckeisen's "Jahrbücher" (1876), pt. 10.

manner of an action, while its employment to denote comparison most probably comes immediately from its radical meaning, *melior meâ* being literally "better away from me," that is to say, "when I am removed," or discounted. Similarly, in Hebrew, comparison may be indicated by the preposition *min*, "away from." That the "comparative" use of the ablative was known to the undivided Aryans seems clear from the fact that it is common to Sanskrit and Latin as well as Old Greek (*e.g.* κρείσσων ἔμεθεν).

The instrumental, like the ablative, was symbolized by several different terminations, relics of which have survived here and there. The most usual is *-â* (at least in Sanskrit), but we also find *-bhi* (as in the Latin *mihi, tibi, sibi, ibi* (*qu*)*ubi*, and old Greek βίηφι), *-sma* or *-smi* and *-ina*. The first termination may be detected not only in the Greek ἅμα, τάχα, ἀνά, παρά, ἄντα, πάντη, but also in the Early English *forthî* and *forhwî*, where *thî* and *hwî* are instrumentals of *the* and *who*. Mr. Peile notes that *forwhy*, "because," occurs in the old version of the 100th Psalm, in which the line "Forwhy the Lord our God is good" is often erroneously printed as a question.[1] The suffix *-bhi* is found in combination with a second suffix in the dual *nau-bhy-âm*, and the plural *nau-bhi-s* and *nau-bhy-as* (*navi-bus*), as well as in the singular dative *tu-bhy-am* ("tibi"), and we may see how little *à priori* reason there can have been for setting it apart to denote a special case from its appearance as a mere derivative suffix in words like the Sanskrit *garda-bha-s*, "an

[1] "Philology Primer" (1877), p. 109.

ass," *vṛisha-bha-s*, "a bull," or the Greek ἔλα-φο-ς, ἔρι-φο-ς, κρόταφος, or κορυφή.[1] The same suffix marks the dative and locative in Old Slavonic. Misled by the preposition *abhi* or *âbhi*, our *of*, the Latin *ab*, the Sanskrit grammarians separated the plural *-bhis* from its stem in the Pada-text of the Rig-Veda; but this error was more venial than the attempt of Ennius to harmonize matter and metre in his famous line "cere-comminuit-brum."[2] The use of the instrumental has been widely extended in Sanskrit, as also in Lithuanian, which has so many affinities with Eastern Aryan. Lithuanian, indeed, employs it to denote an idea cognate to that of the verb, like the cognate accusative in Greek or Latin, as well as predicatively after a verb of being where in Latin we have a dative. The Latin ablative of description (as in "vir animo magno") is also replaced in Lithuanian by the instrumental; but in this case Lithuanian seems to have preserved the primitive Aryan usage, as it has certainly done in its employment of the instrumental in a sociative sense. It is possible that the instrumental and sociative were once distinct cases as they still are in Finnic or Ugrian, but it is more probable that the sociative meaning only gradually developed out of the instrumental one. "To strike with a sword," or "to go with a ship," may be equally regarded as instrumental or sociative.

We have seen in a former chapter that the dual is

[1] Bergaigne: "Mémoires de la Société de Linguistique de Paris," ii. 5; Curtius: "Zur Chronologie der indogermanischen Sprachforschung," p. 79; Jahn's "Jahrbücher," 60, p. 95.

[2] Such freaks do not even imply that the termination was felt to be separable from the stem, since in *cerebrum* the stem is *ceres* (Sansk. *'siras*), *sr* becoming *br* in Latin.

older than the plural, and that the survival of the dual into the undivided Aryan epoch, and even into the classical age of Hindustan and Greece, shows how hard it is for linguistic forms to die in a settled language even when there is no longer any need or meaning for them. Its various cases, however, were less and less used, and hence many of them came to be lost or confounded together. In Sanskrit three distinct forms only were preserved, in Greek only two, while the scanty relics of the dual in Latin present us with but a single case.

We need not dwell upon those crystallized cases, the adverbs, and the prepositions which have grown out of them. The genitive πάρος, the locative παρὰι, the instrumental παρά, or the ablative *apud*, all tell their own tale. Even in Homer, as in our own modern English, we may watch the passage of the adverb into a preposition. There is but a short step between using εἰς as an adverb, the object being governed by the verb as in αὐτοὺς δ' εἰσῆγον θεῖον δόμον (Od. iv. 43), and turning it into a veritable preposition,[1] or between saying in English "what he told us of" and "of what he told us."[2]

We can trace the history of the verb with far greater completeness and certainty than we can the history of the noun. The history of the noun is one of continuous decay. We may catch glimpses, indeed, of a time when the cases were not as yet sharply defined, when the stem could be furnished with a number of unmeaning suffixes,

[1] See Hoffmann: "Die Tmesis in der Ilias" (1857-60).

[2] Penka, in his "Nominalflexion der indogermanischen Sprachen" (1878), gives a useful review and criticism of the different theories that have been held as to the origin and meaning of the Indo-European cases, but his own views on the subject are retrograde.

and when these suffixes could be used indifferently to express the various relations of the sentence. But long before the age of Aryan separation, the several relations in which a word might stand within a sentence had been clearly evolved, and certain terminations had been adapted and set apart to denote these relations. The creative epoch had passed and the cases and numbers of the noun had entered on their period of decay. But with the verb it was quite otherwise. Here we can ascend to a time when as yet an Aryan verb did not exist, when, in fact, the primitive Aryan conception of the sentence was much the same as that of the modern Dayak. Most verbs presuppose a noun, that is to say, their stems are identical with those of nouns. The Greek μελαίνω for μελάν-γω presupposes the nominal μελαν just as much as the Latin *amo* for *ama-yo* presupposes *ama*.

So, again, the Latin *parturio* comes from the suffix *-tor, -tar*, which plays so large a part in Aryan inflection. Perhaps the truest account that can be given of the relation between verb and noun is that both go back to the same stems, but that the verb is of later origin than the noun. Indeed, the verb has no special classificatory suffixes of its own; those which it possesses are all borrowed from the noun. The so-called root-verbs, like the Sanskrit *ad-mi*, which affix the personal ending to the bare root, are more probably decayed relics of older and longer forms than primitive verbs. What characterizes the verb are its inflections, and these inflections may for the most part be resolved into affixed personal pronouns. In Old Egyptian *mch-a* is "I fill," *per-a*, "my house," where no formal distinction can be drawn between the

verb with its pronominal affix and the noun with its possessive; in Magyár *vár-om* is "I await him," *nap-om*, "my day;" and so, too, the ancient Aryan *bhara-mi* probably served equally well for "I bear," and "my bearing." But there was this important difference between the Aryan and the Magyár or Old Egyptian forms: in Aryan the pronoun was attached to a stem, and this stem might embody more than one suffix.

The precise way in which the personal pronouns came to be affixed to these stems we do not know. Judging from the analogy of other languages we should expect to find them affixed rather to a participle or a noun than to a stem, and this participle or noun moreover constituting of itself the third person singular and plural. But the Aryan dialects have always shown a strong tendency to compound words by dropping the flection of the first and leaving only the stem; possibly this was due to the loss of the accent on the flection-ending, which was primitively accented. Up to the last a new compound demanded but a single flection or relational affix; the Greek had to pronounce ῥοδοδάκτυλος, the Roman *calc-fio*, just as we ourselves instinctively say *mouse-trap* and not *mice's trap*. When the Latin language began to form fresh compound tenses by the help of the substantive verbs, it reduced the principal verb to its mere stem or even root, creating forms like *amavi* (*ama-fui*), *amabo* (*ama-fuo*), *rexi* (*reg-(e)si*). Hence we may perhaps infer that when the parent-speech had come to weld noun and pronoun so closely together as to form but a single idea, the distinctive termination of the noun disappeared, and the stem alone remained with the pro-

noun affixed to it. However that may be, *bharâ-mi*, τίθη-μί, originally signified nothing more than "bearing of me," "placing of me," the length of the thematic *â* in *bharâ-mi* showing that it represents the European *ŏ*, the a^2 of Brugman and De Saussure. The weakening of *ma* to *mi* may be due to the same striving after differentiation that makes the Hungarian write *nap-om*, "my day," but *var-ok*, "I wait;" at all events it is hard to admit the theory which derives the personal pronouns from the verbal terminations. It is interesting to observe that the objective form of the first personal pronoun is used; the speaker had not yet come to regard himself as a subject, and the nominative *agham* (*ego*) was not yet in existence.

From the first the Aryan verb seems to have denoted time as well as mood and relation. Its first two tenses represented the one a momentary action, the other a continuous or completed action. The meaning expressed by each was fitly symbolized by the bare stem or root and reduplication. Out of the first tense grew what is termed the second aorist in Greek, of which ἔ-λιπο-ν is a type; out of the second the perfect. But the perfect soon assumed a variety of forms and covered a variety of significations. The full reduplication of the root might be contracted into a broken one by phonetic decay; *tud-tud*, for instance, might become *tutud*. Or it might be replaced by a lengthened vowel, just as *fēci* in Latin stands for an earlier *fĭfĕci*; and thus *lĭp-lĭp*, perhaps, passed into λειπ-. The ideas, again, which could be represented by reduplication were numerous. Not only might it mark past time or continuous action, it could equally express

completion, intensity, desire, or causality. Thus the Scotch *gang*, Gothic *gagga*, is almost the sole remnant of a reduplicated perfect left in the Teutonic languages; reduplication characterizes intensives and desideratives in Sanskrit; and the Greek βι-βάω or Latin *sīdo* for *sĕ-sĕdo* have a causal force. The idea of continuous action moreover involves not only that of completion, but what seems quite opposed to it, that of present action as well. The present is divided from the perfect by a narrow and shifting line; to *have* been doing a thing does not exclude the possibility of still *doing* it. In Greek ἧκω is a perfect and οἶδα a present; and the Latin use of *cœpi* or *memini* need not be referred to. The present, accordingly, was developed side by side with the perfect, and like the latter required reduplication to show that the idea was to be dwelt upon. Greek presents like δίδωμι are among the oldest relics of the grammar, though the reduplicated vowel has been changed to distinguish the present and perfect tenses.

With the creation of a present tense, a new verbal stem was called into existence. While the simple stem or root was left to the aorist and the reduplicated perfect, a stem with lengthened vowel seemed requisite to denote present time. Hence the number of reduplicated presents tended constantly to decrease, while those with augmented vowels tended to increase. Simultaneously new stems were taken up from among the nouns, and the person-endings were attached to roots furnished with the classificatory suffixes *nu*, *na*, *ta*, and *ya*. Sometimes two or more suffixes were combined together, and a time came when almost any noun-stem might be turned into a verb

by affixing *ya*—itself a nominal suffix—and the person-endings.[1]

Meanwhile the aorist had undergone a change. A short vowel, the so-called temporal augment, was prefixed to it, the origin and explanation of which have been a sore puzzle. Buttmann and Pott suggested that it was a case of broken reduplication; Hoefer identified it with the Teutonic *ga-, ge-*; Benfey made it the instrumental of a pronominal stem *a-*, used like *sma* in later Sanskrit to denote past time. Then Bopp made a second guess, and supposed it might be the same as the privative *a*, or rather *ana*, "he does it not (now)" being equivalent to "he did it." After Scherer's attempt to explain it from *a*, "in the neighbourhood of," Bopp's third suggestion that it might be the pronoun *a* in the sense of "that" or "there" was adopted by Schleicher and Curtius, but this suggestion too was far from satisfactory. Whatever may have been its origin, the use of the temporal augment was soon extended and a new tense, the imperfect, formed from the present-stem on the model of the aorist. One result which the augment had was to modify the person-endings. The increased weight of the word at the beginning was compensated by lightening it at the end, and the final vowels of the suffixed pronouns, and sometimes even the pronouns themselves, altogether disappeared. In this way a secondary set of person-endings was created

[1] This is the usual theory. But Fick has gone far to show that the long stem of the present is the primitive one, out of which the shortened aorist-stem has grown through a shifting of the accent from the stem-syllable to the final syllables of the tense (Bezzenberger's "Beiträge," iv. 1878). Benfey was the first to notice that the aorist is an old imperfect.

which characterized the past tenses quite as much as the augment. While the primary endings remained *mi, si, ti; vas, thas, tas; mas, ta, nti,* the secondary endings were *m* (*n*, -), *s*, *t* (-); *va, tam* (τον), *tâm* (την); *ma* (*mas*), *ta* (*te*), *n*, (*us*).[1]

But new ideas presented themselves, and new forms were needed to express them. Composition has always been a favourite process to the Aryan mind, and nothing is easier than to put two verbs together when we want to denote a compound verbal idea. This is what the Semites did; and this, too, is what the modern Greeks did when they said θέλομεν 'ν' ἀναχωρήσομεν, for "I will go;" and what the Romanic peoples did when they made *amare habeo* (*aimerai*) serve for a future. We must not be surprised, therefore, at finding that the Aryans, even before their separation, possessed compound tenses. First of all there was the sigmatic aorist, Sanskrit *adiksham*, Greek ἔδειξα(μ), formed after the analogy of ἔλιπον with the aorist of the substantive verb (*âs-a*). Then there was the future (*bhavishyâmi*, λύσω for λύσγω), in which we may perhaps trace the substantive verb (*as*), and the verb of "going" (*ya*). The same verb of "going" has also been detected in the optative (*bhavcyam, siem*, φέροιμι), but we are more probably dealing here with the suffix *ya*, which occurs so plentifully both in nouns and in the present stem. If Curtius is right, the termination of the optative which we have in the Greek φέροιμι is a relic of that early period when the person-endings were still primary. In Latin the suffix *ya* became *ī* and *ē*, *siem* passing into *sim* on the one side, and into *sem*, as in *es-sem* or *fo-rem* (*fu-sem*), on

[1] Or rather *nr*, the final *s* being due to false analogy.

the other. In *amêm*, however, the vowel is due to the conjunction of *i*, from *ya*, with the final *a* of the stem (*ama*). The optative introduces us to a mood as distinguished from a tense, since it expresses the remote contingency, the possibility, in short, of an event. The use of the optative belongs to a time when the distinction between fact and fancy was clearly felt: the speaker knows that he is a thinker, a *man*, and as such can discuss his own thoughts. In Latin the optative is frequently employed to denote the future regarded as a possibility, as in *reges, reget, audiemus*. But just as a fact may be momentary or continuous, past or present, so, too, contingency may be near or remote. By the side of the optative went the conjunctive, denoting probability, and symbolized by the suffix *a*, which coalesces with the final vowel of the stem into *â*. In classical Sanskrit the conjunctive has disappeared; in the Rig-Veda, however, we find forms like *asâni* (*asâmi*), *asâsi, asâti*, or *vahâni, vahâsi, vahâti*, answering to the Greek ἴομεν with a short vowel, and ἔχω̃, ἔχῃς, ἔχῃ, the Latin *veham, vehas, vehat*, with a long vowel. In the Homeric poems the conjunctive often takes the place of the future, and the same is the case with the first person of the so-called third and fourth conjugations in Latin.

Apart from the imperative, whose second person singular sometimes ended in *-dhi* (*-θι*), sometimes in *-si* (δός, Vedic *mâ-si*), sometimes had no termination at all, the verb of the undivided Aryan community possessed no other tenses or moods. It was left to the separate branches of the family each to work out its verbal system in its new home, and in its own way, adding new

forms, forgetting others, now amalgamating and now dissociating. In classical Sanskrit, owing, in large measure, to the excessive growth of composition, several of the tenses of the Vedic verb were lost, such as modal forms of the simple aorist, while new tenses came into use. Among these may be noted a future formed by adding the present of the auxiliary *as* to a derivative noun of agency in *tar* (*bhavitâsmi*), and a periphrastic perfect like *bhâvayâm chakâra*, "he caused to be" (literally, "he made a causing-to-be"). In Greek we meet with many additions to the primitive system of the verb. A pluperfect was formed from the perfect, after the example of the imperfect from the present, by the help of the auxiliary *as*; but the Homeric ἐπεποίθε(σ)α passed by false analogy into ἐπεποίθειν, and was finally replaced by a periphrasis. A new perfect in -κα made its appearance, as well as a few aorists created by the aid of the same suffix; while in other cases the tendency to aspiration which made the Athenians speak of ἵππος (*aśwas, equus*) or ὑδώρ (*udas, udus*) affected the second consonant of the root so that the old τέτυπα became τέτυφα.[1] Like the weak passive future and optative future, this aspirated perfect is not to be found in Homer. In Homer, too, we find only one instance (Il. x. 365) of the strong future pas-

[1] The perfects in κ are peculiarly Attic. There are twenty instances in Homer, but only from stems which end in a vowel. This is also the rule with the instances found in Herodotus (excepting κεκομικώς, ix. 115), Æschylus, Sophokles, and Thukydides. The perfects in κ are further met with in Æolic and Doric. No aspirated perfect occurs in Homer, except in the middle voice (*e.g.* δειδίχαται), nor in Herodotus (except ἐπεπώμφεε, i. 85), nor in the Tragedians (except τέτροφα in Sophokles), nor in Thukydides (except πέπομφα).

sive, and only two of the late Attic desiderative (Il. xii. 265, xiv. 37). The paulo-post future, the two passive futures, and the two passive aorists are all again products of Greek soil, the latter being formed by the aid of the suffixes *ya* and *dha* (θε), which may very possibly be the verbal roots we have in *i-re* and τί-θη-μι. The primitive Aryan verb possessed no passive voice; in fact, the passive, like the neuter verb, is a comparatively late creation. To the early intelligence every action seems to require an object, and to turn an object into a subject needs considerable powers of abstraction. Hence the parent-speech knew only of the transitive or active voice; the *parasmaipada*, or "words for another," as the Sanskrit grammarians called it, and the middle or deponent voice, the *âtmanepada*, or "words for self." "I am loved" means the same as "one loves me," "I am fed" as "I feed myself" (*vescor*); and we can, therefore, easily understand not only that it was long before language needed a passive, but also that when the need was at length felt, it was readily supplied by the middle forms. In Greek, accordingly, no distinction is made between middle and passive, except in the two aorist tenses, and in Latin "deponents" have the same forms as passive verbs, while the second person plural, *amamini* (*estis*), is but the middle participle, which we elsewhere find in *auctumnus*, *vertumnus*, or λεγόμενος. It is very possible that the terminations of the old middle voice may be explained by the amalgamation of two personal pronouns. In Sanskrit the primary person-endings of the singular are *-i*, *-se*, *-te*, in Greek *-μαι*, *-σαι*, *-ται*, while the secondary endings are *-i*, *-thâs*, *-ta*, Greek *-μην*, *-σο*, *-το*; and we may,

perhaps, resolve these into *ma* + *mi*, "me-me," *twa* + *twi* "thee-thee," and *ta* + *ti*, "he-he;" certainly the secondary termination of the first person in Greek gives considerable probability to this analysis. In Letto-Slavonic the middle is formed by the reflective pronoun of the third person, as Old Slavonic *divlja sę*, *diviše sę*, "I admire myself," "thou admirest thyself," or Lithuanian *dývyjů-s*, "I admire myself," just as in German dialects we meet with *wir bedanken sich*, instead of *uns*, or in the dialect of Mentone the reflective *se* takes the place of *no* (*nous*), when the first person plural is both subject and object (e.g. *nautre se flatema*, "nous nous flattons").[1] In Old Prussian *mien* and *tien* have taken the place of the third personal pronoun in the first and second persons, through German influence. In the Old Norse reflectives and middle voice *-mk* for *mik*, "me," and *-sk* for *sik*, "self," mark the first and third persons; "I come," for instance, being (*ek*) *komu-mk*, "they love one another," *þau elska-sk*. The third person pronoun, however, forced its way in time into the first and second persons also, *berju-mk*, for example, becoming *ber-sk*, while on other occasions it coalesced with the pronoun of the first person, producing the abnormal *komumsk*.[2] *Bua* in Icelandic signified "to build," "make ready," *bua-sk*, "to make oneself ready;" and from this comes the Old English *busk*, just as *bask* is

[1] See Brugman: "Ein problem der homerischen Textcritik" (1876), p. 38.

[2] Wimmer-Sievers: "Altnordische Grammatik" (1871), pp. 135, *sq.* In a Sleswig Easter-play of the fourteenth century we find *wir woln sich wern* (Kehrein, iii. § 101), and many instances of the same use of the third person reflective pronoun for the first or second person in Grimmelshausen's "Simplicissimus" (ed. Keller).

either "to bathe oneself" or "to bake oneself." Naturally enough, the different Aryan languages did not always agree as to the idea to which they assigned a reflective or middle sense; the idea of "taking," for instance, implies the further object "self," for whose sake a thing is taken; and in Sanskrit, accordingly, *labh* is only conjugated in the middle voice, though active in sense. The corresponding Greek λαμβάνω, however, is as frequent in the active as in the middle.

We have already alluded to the revolution undergone by the Latin verb. The old reduplicated perfect was almost extirpated by the new formatives in *-si* (from *as*) and *-vi*, *-ui* (from *bhu*); new pluperfects and futures were created by attaching *eram* (*esam*), *essem*, and *ero* to the perfect; a new optative was made by the help of *sem* (*siem*), and a new imperfect and future in *-bam* and *-bo* were derived from the auxiliary *fuam*, *fuo*. Scherer, indeed, has suggested that the auxiliary verb in the two latter instances was *dha*, "placing," on the ground that this was the source of the new Teutonic perfect (*lag-i-da*, *lai-d*); but the suggestion is untenable, not so much because the root *dha* appears as *do* in *condo*, *abdo*, as because we find an Old Irish future in *b* (as *caru-b*=*ama-bo*), and though a Latin *b* may come from *dh*, a Keltic *b* cannot. We have here an illustration of the importance of extending our field of observation as widely as possible before laying down philological dogmas, or propounding philological theories. One of the most frequent fallacies committed in linguistic science is that of insufficient induction, a few leading languages, such as Sanskrit or Greek, being assumed as standards by which all conclu-

sions must be tested and arrived at. A study of Keltic grammar has enabled us to correct another error in regard to the Latin verb, which has been long and widely believed, and is at first sight extremely plausible. It will be noticed that almost the whole of the middle or passive voice in Latin has undergone a transformation, which makes it exceedingly unlike the middle voice of the undivided speech. The characteristic of the Latin passive is the letter *r*, which Bopp thought might be explained from the reflective pronoun *se*, *s* between two vowels changing into *r* in Latin. In this case *amor* would stand for *amo-se*, *amari* or *amarier* for *amasi-se*, and the formation would be in strict harmony with that of Old Norse or Letto-Slavic. But unfortunately it turns out that the characteristic of the Old Irish passive was also *r*, and a Keltic *r* cannot be derived from an earlier *s*. At present, therefore, we must remain without an explanation of the Latin and Keltic passive, content only to discover how close a connection exists between the grammatical forms of the two groups of tongues.[1] The terminations of the Latin perfect present another problem which still awaits a satisfactory solution. Prof. Harkness[2] has ingeniously suggested that we should compare it with the Sanskrit *âsa* for *asasma*. In this case the Old Latin *esī*, "I was," would stand for *esīmi*, and that for *esismi*, *esit* and *esimus* would be similarly for *esist* (*esisti*), and *esismus*, while *esisti*, *esistis*, and *esĭsunt* (compare *dedĕrunt*, *dedisont*) would need no ex-

[1] But see above, p. 113, note 2.

[2] "Transactions of the American Philological Association" (1875).

planation. But the first link in the chain of reasoning is not a strong one.

This sketch of Aryan grammar must have made it clear that the principle of flection is not carried out purely and persistently in our family of speech. Flection primarily consists in internal vowel-change, or some corresponding mode of *symbolizing* the relation that words bear to one another in a sentence. In the Aryan family this symbolization seems to have been effected as often by vowels or syllables following the "root" as by a change in the vowels within the root itself. If we ask why the suffix *ya* should have been chosen to mark the feminine gender, we can only reply that this was the grammatical conception of which it was made the symbol. M. Hovelacque believes that the suffix *ta* denotes the passive, the suffix *ti* the active, and that the latter suffix has produced a large number of active nouns as opposed to the passive and older forms in *ta*. In this case the difference of meaning will be indicated by the final vowel. We have more than once had occasion to notice the variation of signification assigned by the Greek language to the variation of vowel in the nominative ὄπες and accusative ὄπας, where Sanskrit would have indifferently *vachas* and Latin *voces*, though the preservation of the *alpha* in the accusative was originally due to the presence of a nasal (ὄπανς), as well as the way in which the language seized upon the difference of vowel that had grown up between ὄπες and ἔπος, making the first a plural and the second an abstract singular. But it is in the verb that the principle of symbolism comes

[1] "La Linguistique," p. 200.

most into play. A slight change of vowel in the reduplicated syllable distinguishes the present δίδωμι from the perfect δέδωκα, and the conjunctive was denoted from time immemorial by an inserted *a*. No doubt these variations of pronunciation were at the outset purely phonetic, and frequently caused by the accent; but as new grammatical ideas and relationships came to be conceived, they were turned into flections by being used as marks and symbols of the newly realized relations of the sentence Examples of the process may be found in the distinction of gender that gradually grew up between *major* and *majus* or in the Greek employment of verbs in -όω as transitives and verbs in -έω as intransitives, though both terminations alike answer to the Sanskrit *-ayâmi*.

The pattern set by vowels or consonants within a word was soon followed by the hitherto meaningless terminations, or suffixes, as we term them, found at the end of words. These, too, came to be used as flections, though it not unfrequently happens that the "flection-suffix" betrays its origin by its identity with a mere classificatory suffix, or a suffix in which we can trace no signification or symbolization at all. Thus the same syllable which in πόδ-ες denotes the nominative plural is in ποδῶν, that is, ποδέσ-ων, at most but classificatory. We must rid ourselves of the notion that "suffixes" were ever independent words like our "if" or "in;" so far back as our knowledge of Aryan speech extends, they possessed no existence apart from the words to which they belonged, and which, again, only existed as words in so far as they possessed these suffixes. Suffixes became flections through the help of analogy.

In course of time, but still long before the separation of the family, Aryan speech entered upon its agglutinative stage. A number of definitely fixed flections were in existence, and the isolated word had been clearly distinguished from the sentence of which it was a member. The need of a verb began, accordingly, to be felt, while old words from constant use had become attenuated both in form and meaning, and tended to attach themselves, like enclitics, to other better preserved words. These attenuated enclitics, or "empty words," to adopt the expressive Chinese name, soon came to be undistinguishable from other suffixes whose ancestry had been entirely different, and along with the latter were liable to be turned into flections. Such flections, however, were by nature imperfect; their agglutinative origin never altogether passed out of the consciousness of language, and a certain dualism was admitted into Aryan speech. When the synthetic period of its life was over, there was everything to favour the introduction of that analytic spirit so congenial to the Aryan genius.

It is not to the Aryan languages, then, that we have to look for the principle of flection in its purest form. This must rather be sought in the Semitic idioms. Here the fundamental distinctions of grammar are wholly expressed by symbols. The verb is a late growth; indeed, the Semitic languages cannot be said ever to have acquired a verb properly so-called, the tenses continuing to denote not time but mere relation. It is only under exceptional circumstances, and through the influence of another language, that such Semitic idioms as Assyrian or Ethiopic came to possess real tenses. The

Semitic verb remained a noun, and whatever tenses and moods it has were of late origin. The first tense was the imperfect (or future) formed by the attachment of the first and second personal pronouns to an abstract noun, the singular of which was used without any suffix for the third person singular, and the plural for the third person plural. The perfect grew up similarly by the agglutination of the first and second personal pronouns to participles and other nouns at a period only just preceding the separation of the Semitic languages, and Assyrian, which was crystallized into a literary language as early as B.C. 2000, allows us to trace its genesis and history. Even in the case of these two tenses, however, the principle of symbolization had full play. The pronoun was prefixed in the imperfect, affixed in the perfect, and so in accordance with the Semitic law which places the defined word before the defining, the perfect brings the verbal stem into prominence and expresses a fact, while the imperfect lays chief stress on the pronoun and expresses the activity underlying a fact. In dealing with Semitic flection, therefore, we must direct our attention to the noun out of which the verb, such as it is, has grown. Now the primitive Semitic noun possessed three cases, nominative, genitive, and accusative, characterized by the symbolical terminations *um* (*uñ*, *u*), *im* (*iñ*, *i*), and *am* (*añ*, *a*). The genitive termination seems a weakened form of the accusative, the latter expressing the object towards which thought is directed. There were three numbers, singular, dual, and plural, the dual being older than the plural (which originally ended in *-âmum*, *ûmum*) and symbolically represented by a lengthened vowel

(*-a'amum*). The feminine gender was distinguished from the masculine by the symbol *t*, which (along with *tan*) played a large part in the classification of nouns. But most of the leading distinctions of sense were marked by internal vowel-change; thus *kadhala* is "he killed," *kudhila*, "he was killed," *kadhl*, "murderer," *kidhl*, "enemy," *kudhl*, "a killing," *kôdhél*, "killing;" while the government of one noun by another was indicated by the two being pronounced in one breath, which led to a shortened pronunciation of the first and the eventual loss of the case-endings. A time came, however, when the Semitic languages entered upon their analytic stage; the old genitive relation was replaced by the insertion of the relative pronoun (itself originally demonstrative) between two nouns, and substantives that had stiffened into prepositions narrowed the use of the ancient cases. To the last, nevertheless, the Semitic tongues have remained faithful to their characteristic feature of triliteralism; that is, every root consists of three consonants or semi-consonants, which form the skeleton, as it were, to which the vowels give life and significancy. Phonetic decay has, of course, attacked these roots and reduced many of them to single or double consonants, while others have been enlarged by additional letters; but in the main every Semitic language is still characterized by its triliteral radicals. Many of them differ but slightly in both sound and meaning, and we must regard them as so many phonetic types that floated unconsciously before the mind of the primitive Semite, whose sole requirement was that they should be capable of being uttered in three syllables. Why three syllables should have seemed the precise

phonetic equivalent of a thought we cannot tell; we must be content with the fact that it was so. Naturally the extent to which flection was carried in Semitic speech restricted the employment of composition, and compounds, accordingly, have always been rare in the Semitic languages. Where an Aryan would use a word like *ire*, "to go," with a preposition *ex* to signify "to go out," the Semite coined a new root. The memory was developed at the expense of the reasoning and analytic faculties.

The Semitic family may be divided into northern and southern. To the northern division belong the sister-dialects of Assyria and Babylonia, the sister-dialects known as Hebrew and Phœnician, and the Aramaic of Syria. Aramaic, however, differs very widely both in phonology and in grammar from the other members of the northern division, and must have branched off from them at an early period. It comprises Biblical Chaldee, the dialect of the Targums, the Syriac of Christian writers, and the Nabathean and Mendaite or Sabean (Zabian). To the southern group belong Arabic, that is, the vernacular of northern and central Arabia, and the idioms of southern Arabia and Abyssinia. Under the latter are included the extinct Himyaritic (Sabæan), Minnean, and Ghe'ez or Ethiopic, and the modern Ehkili, Tigré and Tigrina, Amharic, and Harrari. The Semitic dialects form a compact group whose original home was Arabia, and resemble the Romance languages, except that their mother-language is unknown. The close similarity that consequently exists among them, together with the loss of their parent-speech, has thrown

great obstacles in the way of their comparative treatment. The Semite has been a trader and intermediary from the beginning; though wanting in originality and scientific analysis, he has always been ready to borrow from others and improve his new possession. A large part of his earliest culture and civilization came from the Turanian Accadians of Babylonia, from whom he derived not only the germs of settled city life, but the elements of mathematics, astronomy, religion and mythology, literature and writing. The cuneiform syllabary of Assyria had been the invention of the primitive Chaldeans, and the Canaanite tribes, when they migrated from the Persian Gulf, do not seem to have been acquainted with it. The so-called Phœnician alphabet, the source of most of the alphabets of the world, was adopted from Egypt, and was probably first used by the Phœnician settlers in the Delta. De Rougé and others have successfully traced it back to the hieratic alphabet of the Egyptians of the Middle Empire. The Aramæan traders of the Gulf of Antioch, who appear to have preceded the Phœnicians proper of Tyre and Sidon, may have employed the hieroglyphic syllabary of the Hittites before the Phœnician alphabet became known to them.

The language of Assyria and Babylonia has been recovered from the inscribed bricks and monuments of Nineveh, Babylon, and other cities, only within the last thirty years. The two countries spoke the same tongue with but slight differences, and as this tongue had been stereotyped for literary purposes at an early period, it presents us, on the whole, with an archaic form of Semitic

speech. In fact, Assyrian may justly be described as the Sanskrit of the Semitic idioms; and its student has the double advantage of dealing with contemporaneous documents, and with a mode of writing in which the vowels as well as the consonants are marked. Assyrian literature, though consisting mostly of translations from older Accadian works, is very extensive, and only a tithe of it has as yet been examined. Every great city had at least one library, and most of these are still lying under the soil, awaiting the spade of the explorer. The literature was partly on papyrus, partly on clay; and though the papyrus has perished, the clay tablets, the *latercul*æ *coctiles* as Pliny calls them, with their minute writing, have remained in a more or less perfect condition. It is with their help that we must reconstruct not only the ancient language of Assyria and Babylonia, but also the religion and history, the culture and the civilization of oriental antiquity. Like one of the Himyaritic dialects, Assyrian preserves the initial sibilant which has become *h* in the other Semitic tongues (as in *su'*, "he," *si'*, "she," and a *shaphel* for the *hiphil* conjugation), but stands alone in changing *s* to *l* before a following dental.

Hebrew is but a local dialect of the Canaanite group to which belong Phœnician, Moabite, and other neighbouring idioms, from which it differs no more than Assyrian from Babylonian, or Somersetshire from Dorsetshire English. The fragments of its ancient literature preserved in the Old Testament are the only sources of our knowledge of it, and the language of most of these has been reduced to the same uniform level shortly after

the Babylonish captivity. Hebrew was gradually supplanted by Aramaic as a spoken language, and though it continued to be used as a literary dialect was more and more coloured by the encroaching idiom of Syria. After the Maccabean epoch Hebrew became extinct even as a literary dialect, though it was still employed for theological and kindred purposes much as Latin was in the Middle Ages. Modern Hebrew may be divided into two periods, the first extending to the twelfth century, with the Mishna as its principal monument, and the second taking its start with the revival of Jewish literature in the south of France. Aramaic, Greek, and Latin words characterize the Hebrew of the first period, the words and phrases of the modern European languages, the Hebrew of the second. The square characters of modern Hebrew are descended from the Aramaic branch of the Phœnician alphabet, and supplanted in the first century before our era the old Phœnician letters, such as we see them on the Moabite Stone. The old letters are still retained in a modified form by the Samaritans, whose dialect, though mixed with Aramaisms, belongs to the Canaanite group. The vowel punctuation of the Old Testament was the invention of the Massoretes of the sixth century A.D., the text up to that time containing consonants only. It embodies the traditional pronunciation employed in Palestine when intoning the Scriptures, and can bear, therefore, but a remote resemblance to the original pronunciation of the language while it was still living. The number and nature of the vowel-sounds must have been much increased and changed, and the accentuation is due to the necessities of monotone.

Phœnician, like Assyrian, is known only from coins and inscriptions, a passage in the "Pœnulus" of Plautus being the sole exception. The "Periplus of Hanno" and the "History of Sanchuniathon" have come down to us only in fragmentary Greek translations. Of the inscriptions, that on the sarcophagus of King Eshmunazar of Sidon (sixth century B.C.) is perhaps the most important. The Punic of the Tyrian colony, Carthage, however, has left us a good many monuments, and though the older Punic is identical with the Phœnician of Palestine, the Neo-Punic, whose chief remains have been found in Tunis and eastern Algeria inscribed in an alphabet of its own, differs from it considerably.

Distinct from Assyrian and Hebrew in phonology, grammar, and vocabulary, though belonging also to the northern division of Semitic, is Aramaic, now represented by a few Neo-Syriac dialects in the neighbourhood of Lake Urumiyah. Aramaic was the dialect of the Semitic highlands, and was once widely diffused over Syria and Mesopotamia. The mercantile position of Carchemish (now Jerablûs) on the Euphrates caused it to become the *lingua franca* of trade and diplomacy from the eighth century B.C. downwards, and in the course of time it succeeded in extirpating Assyro-Babylonian, Phœnician, and Hebrew, just as it was itself afterwards extirpated by Arabic. Syriac, or Christian Aramaic, has no monuments older than the first century of our era, to which some of the Palmyrene inscriptions go back, but the Peshito or Syriac translation of the Bible (made about the beginning of the third century) laid the foundation of an extensive and important literature, mostly, how-

ever, of an ecclesiastical character. The Syriac writers were the first, it would seem, to elaborate a system of vowel notation and stops, and they served to introduce Greek science to the Arabs. In fact, most of the early Arabic translations from Greek were made by Syriac writers and based on Syriac versions. A considerable literature also appears to have flourished among the Mendaites of the fourth and fifth century, partly in the Nabathean, partly in the Sabean dialects. All we know of Nabathean literature, however, is derived from the Arabic translations of Ibn Wahshiya (A.D. 904), the most notable work being Kuthāmī's "Nabathean Agriculture," and the medical fantasies of Tenkelusha or Teukros. The "Book of Adam" is the chief product of the Sabean dialect. The Mendaite idioms are remarkable for the extent to which the confusion and decay of the gutturals have proceeded as well as the numerous contractions undergone by words. The Aramaic group is distinguished by its tendency to change the sibilants into dentals, by the so-called "emphatic aleph," which is really a post-fixed article, and by its formation of passive conjugations with the help of the prefix *eth*.

The Arabic of Central Arabia, more especially of Mohammed's tribe, the Koreish of Mecca, may be classified under two periods, though to this day the Bedouins of the interior still speak a language which is not only as pure and unaltered as that of the Korân, but even in some respects more archaic than the Assyrian of Nineveh. The first period is that of the pre-Islamitic poems, of the Moallakât, the Hamâsa, the Kitâb el Agâni, the Divan of the Hodheilites, and culminates in the Korân as revised by

the Khalif Othman (A.D. 644-656). In the modern period the language has undergone phonetic decay to a certain extent, the case-endings have been lost, and foreign words introduced. The four Arabic dialects of Barbary, Arabia, Syria, and Egypt vary but very slightly from one another, the dialect of Barbary alone presenting some grammatical differences. Arabic, or Ishmaelite, as it is better called, has, like Assyrian, retained many of the features of primitive Semitic grammar; its phonology, however, in common with that of the other south Semitic dialects, departs widely from that of the north Semitic group, and has developed certain new sounds (*ḍ*, *ṭs*, *sh*, *hh*). The original termination of the case-endings in *-m* has become *-n*, the demonstrative has passed into an article, as in Hebrew, and the old plural has been almost entirely replaced by collectives or "broken plurals," which characterize the whole of the south Semitic branch. Of the nineteen primitive conjugations or forms of the verb Arabic preserves nine, and its vocabulary is singularly large and abounds in delicate distinctions of meaning. Arabic literature is enormous and very varied; but we may notice its contributions to science in the Middle Ages and its lyrical poetry, for which it is still famous. The "mixed" jargons of Maltese and Mosarabic may be described as corrupt Arabic dialects; the latter was spoken in the south of Spain, and did not become quite extinct till the last century. The language of the Sinaitic inscriptions, which are written in a Nabathean alphabet of the third and fourth centuries, is also Ishmaelite, though influenced by Aramaic.

The "Joktanite" dialects of southern Arabia and Abys-

sinia present several peculiar features. The earliest we know are the two dialects of Saba and Minna (Ma'n), contained in the Himyaritic inscriptions, many of which are earlier than the Christian era. They have preserved the primitive mimmation (or case-ending in *-m*) of the Semitic languages, as well as the three cases themselves, and they have the peculiarity of forming a subjunctive from the imperfect by affixing *n* to the third person singular, and doubling it in the plural. The Minnean or Minæan dialect agrees with the Assyrian in retaining the older Shaphel conjugation instead of the Hiphil of Sabæan and Hebrew, and the older forms of the third personal pronoun (*sa*, *su*, *sumu*), with *s* instead of *h*. The Ehkili dialect of Mahrah is the modern representative of the extinct Himyaritic. From the south of Arabia the Joktanite Semites crossed over into Abyssinia under the name of Ghe'ez or "Free Emigrants," carrying with them their language and alphabet. The language became known as the Ethiopic, and the alphabet was changed into a syllabary, written like the Assyrian cuneiform from left to right. Two inscriptions in Ethiopic of the fifth or sixth century exist at Axum, and after the conversion of the country to Christianity in the fourth century, Ethiopic was much cultivated as a literary language, and many theological works as well as the Bible were translated into it. It is to these translations that we owe the Book of Enoch, the Apocalypse of Isaiah, and the Book of Jubilees in a complete form. Ethiopic is now a dead language, only used for liturgical purposes, its place having been taken by the Amharic in the south-west, the Tigrê in the north, and the Tigrina in the centre.

The latter dialects have borrowed a good number of words from the surrounding African tongues.[1]

Attempts have been made from time to time to connect these Semitic languages with the Aryan family, and as a necessary commencement of such an undertaking to reduce their triliteral roots to monosyllables. But all such attempts have ended in failure. Roots like *k-dh-l*, "to kill," obstinately refuse analysis, and the investigators cannot agree as to whether the refractory letter is to be sliced off at the end, at the beginning, or in the middle, or even in any place that seems most convenient. But words are changed rather by the action of phonetic decay than by the addition of new letters, and the resemblances that have been pointed out between Aryan and Semitic roots are in almost all cases easily accounted for by the imitation of natural sounds. The number of parallel roots that exist in Semitic of similar sound and meaning, such as *katsats*, *ka'sa's*, *gazaz*, *gazah*, *gazam*, *gaza'*, *gazal*, *gazar*, *khadad*, *gadad*, *kadad*, *gadah*, *guz*, *khatsats*, *khatsah*, *katsa'*, *kâtsar*, *ca'sakh*, *ca'sam*, *khatsah*, all containing the idea of "cutting," can only be explained, not by a theory of addition and subtraction, but by looking on particular sounds as so many phonetic types which presented themselves before the unconscious mind as symbols of the conceptions attached to them. In fact, the Semitic root can have no possible existence outside the dictionary and

[1] The recent decipherment of the inscriptions of Safa, east of Damascus, by M. Halévy, shows that a South-Arabian population had been settled in this country from time immemorial, distinct from the new settlers from the Hidjaz, whose presence is recorded by the Græco-Arabic inscription of Harran in Ledja (A.D. 568), "Z. D. M. G." xxxii. 1 (1878).

grammar. Before a combination of three consonants can be pronounced vowels must be supplied, and the root consequently changed into a word whose meaning varies according to the vowels with which it is sounded. But whether the Semitic root was originally "biliteral" or not, the endeavour to derive the Semitic and Aryan families from a common ancestor violates all the axioms of linguistic science. The two families are each inflectional, it is true, though in a varying degree; but here the likeness between them ends. In phonology, in structure, in grammar, and in vocabulary no two groups of speech can be more dissimilar. Grill contrasts the "formal" consonantalism of the Semitic root with the "materialistic" vocalism of the Aryan, but the reason of this contrast lies deeper than he seems to suppose. Vowels cannot form the skeleton, as it were, of Semitic speech, since they constitute its flesh and blood, the symbols of those relations of grammar which are denoted in the Aryan languages by suffixes. Speaking generally, we may say that the part played by suffixes in Aryan is played by the vowels in Semitic. Hence it is that while composition is the very life and essence of Aryan speech, it is thoroughly repugnant to Semitic modes of thought. With the Semite the universe is an undivided whole, not a compound resolvable into its parts. If we turn to phonology, here, too, we are met by the same contrast. The Aryan velar gutturals (*kw*, *qu*, *gw*) are as foreign to the Semitic tongues as the Semitic *'ain* and *dhcth* are to the Aryan. The power of augmenting its vowels by prefixing *a* to *a*, *i* and *u* (*guṇa* and *vriddhi*) possessed by the Aryan dialects is unknown to the Semitic. So,

again, in the grammar it is difficult to conceive of two more opposed points of view than those embodied in Aryan and Semitic. The Semite has never developed a true verb; such verbs as he has presuppose a noun just as much as the Aryan noun, on the contrary, presupposes the verb. Relation, not time, is expressed by the Semitic sentence. As in Turkish, therefore, the third person remains a pure noun, undistinguished by any pronominal suffix, and like the noun admits of a distinction of gender. It is needless to refer to other points of contrast, the three cases of the Semitic noun, for instance, as opposed to the numerous cases of the Aryan substantive, or the insertion of a letter (*t*) with modifying force within the body of a word; it is enough to draw attention to the fundamentally different conceptions upon which the whole syntax of the two classes of speech is built. In Aryan the predicate and governed word were originally placed before the subject and governing word; the converse was the case in Semitic. The entire point of view from which the grammar started was thus reversed in the two families of language. It is true that with the lapse of centuries the Aryan sentence became complex and confused, and though Teutonic English still says "good man," and "man's good," the Frenchman speaks of *l'homme bénévole* and *la bénéficence de l'homme;* it is true, also, that Assyrian acquired the habit of making the object precede the verb, possibly in consequence of Accadian influence; nevertheless if we look at the two families of speech as wholes, we shall see that the syntax of each has remained faithful to its primitive starting-point. It is difficult, however, to compare the rich development of

the Aryan sentence, with its numberless conjunctions and verbal forms, with the bald simplicity of Semitic expression. The Aryan sentence is as well fitted to be the instrument of the measured periods of reasoned rhetoric as the Semitic sentence is of the broken utterances of lyrical emotion.

The attempts, then, that have been made to derive the Aryan and Semitic families from a common source must be pronounced scientifically worthless. Mere morphological agreement hardly raises even a presumption in favour of genealogical relationship. It is quite otherwise, however, with the endeavours to prove a connection between the Old Egyptian of the monuments, along with Coptic and Libyan, and the Semitic group. A relationship of some kind certainly exists between them, since the grammatical agreement is most striking, though the disagreement in both structure and vocabulary is equally striking. We have already had occasion to refer to this puzzle of comparative philology, and to suggest that at a certain period of growth a language may possibly borrow from the grammar of another. However this may be, the Old Egyptian which can be traced back upon contemporaneous monuments to an antiquity of about six thousand years is an inflectional language, like the Coptic, which has sprung from it, though the flection is simple and imperfect. As in Semitic, the feminine is denoted by an affixed *t*, which may also precede the noun, there is a construct genitive, and the personal pronouns bear a remarkable resemblance to the Semitic ones. A dual (in *-ui*) exists as well as a plural (in *-u*), but no signs of case-endings have been detected. The verbal forms are

simple enough; much use is made of auxiliary verbs, and the persons are expressed by suffixing the personal pronouns. Indeed, the pronoun suffixes have the same form whether they are attached to a noun used as such or as a verb, *per-a*, for instance, being "my house," *mch-a*, "I fill." There are several conjugations, four formed by partial or complete reduplication (as *kebkeb*, *kekeb*, *kebeb*, and *kebek* from *keb*), one by the insertion of *t* within the root (*keteb*), as in Semitic, one by the insertion of *n* and sometimes *r* (*keneb*), one, again, by prefixing *a* (*akeb*), and another by prefixing *se* (*sekeb*). It is remarkable that the last conjugation is causative like the Semitic shaphel. A passive may be formed by the postfix *tu*, *ta*, or *t*. The subject is occasionally placed before the verb, but the usual order is verb, subject, direct object, indirect object, and adverb. Egyptian literature was at once ancient and extensive, though fragments only have escaped destruction. Perhaps its most important document was the "Ritual of the Dead," a chapter of which is quoted on the coffin of Men-ke-ra or Mykerinus of the fourth dynasty (B.C. 4100), though additions and glosses continued to be made to it up to the Ptolemaic period. During the long course of centuries along which we can trace its history, the Egyptian language necessarily underwent considerable change, *ts*, for instance, becoming first *d* and then *t*, until it finally passed into Coptic. The Coptic is divided into three dialects, the Bashmuric in the north; the Theban in the south; and the Memphitic, which had the aspirated *kh*, *th*, and *ph*. Coptic is a prefix language, the affixes of the Old Egyptian having been exchanged for prefixes, as in the neighbouring

African idioms. In the verb, however, the suffixes may be affixed as well as prefixed. Coptic literature is Christian, and flourished from the second to the seventh centuries. It is written in a modification of the Greek alphabet, the old mode of writing, whether pictorial, hieratic, or demotic, having been thought to savour of heathenism.

Connected with Old Egyptian is the Libyan or Berber group of tongues, extending from Marocco to the south of Tripoli, and split up into several dialects, among which the Kabyle, the Towareg, and the Ta-mashek may be mentioned. More than 200 inscriptions, some of them bilingual, have been found, which present us with an old form of Berber speech.[1] As in Egyptian and Semitic *t* is the sign of the feminine: it may be prefixed or affixed or even prefixed and affixed at the same time. The personal pronouns are affixed, though they may also be prefixed in the case of verbs, and there are different forms for the dative and accusative. Two real tenses have been developed, one aoristic, as *isker*, "he made," the other present, as *isáker*, "he makes." The two forms correspond most remarkably with the Assyrian *iscun*, "he made," *isácin*, "he makes," and seem to bear out the view that the Assyrian distinction of tense was imported from abroad. The causative conjugation is formed by the prefix *is-*, the passive and frequentative by the prefix *it-*. The language of the Guanches or aboriginal inhabitants of the Canary Isles belonged to the Berber family.

[1] See Faidherbe's "Collection complète des Inscriptions numidiques," in the "Mémoires de la Société des Sciences etc. de Lille," 3rd ser. viii. p. 361 (1870).

To the south and west of Abyssinia lie a number of dialects—Somâli, Galla, Saho, Denkâli, and Agaŭ,[1] which are classed together as Ethiopian or Khamitic, and show striking marks of agreement with the Coptic and Berber. Thus *t*, whether prefixed or affixed, is a sign of the feminine, *s* or *es* the characteristic of the causative conjugation, while there are two "tenses," with much the same meaning as those of the Semitic verb, and similarly distinguished by prefixing and affixing the personal pronouns. These Ethiopian dialects lead on to the Haussa of the Soudan between the Niger and Lake Chad, which, though spoken by a purely negro population, resembles the Libyan family in many of its grammatical and lexical details. Thus the plural may be denoted by the termination *-ūna*, *-ānu*, *-āne*, shortened to *-ū*, like the Egyptian *-u* and the Semitic *-ānu*, *-ūnu*, the feminine by the termination *-nia* or *-ia*, abstracts by the suffix *-ta*, and local and instrumental nouns by the prefix *ma*. A causative is formed by the suffix *-shie*, a passive by the vowels *-u* and *-o*, while the personal pronouns bear a remarkable resemblance both to the Egyptian and to the Semitic.[2] The pronominal suffixes are also used in the same way as in the Egyptian and Semitic languages. Barth believes that the Haussa represent the Atarantes of Herodotus (iv. 184), whose name he would explain as *a-tăra*, "the collected." At any rate, it seems clear that the Haussa once occupied a position much further to the

[1] The Beja dialect, spoken by the Hadendoas and some of the Beni-Amer, north of Abyssinia, also belongs to the same group.

[2] *Na*, *ni*, "I," *mū*, "we," *ka*, *kai* (masc.), *ke*, *kī* (fem.), "thou," *kū*, "you," *sha*, *shi*, *ya*, "hé," *ta*, "she," *sū*, "they."

north-east than that in which they are at present found, and it is possible that while thus bordering on the Libyan tribes they may have borrowed those portions of their grammatical machinery which have so Semitic an appearance.

But whatever may be the opinion formed on this head, if we turn our eyes to the extreme south of Africa, we shall find a family of dialects which Bleek has claimed for the inflectional class of tongues. These dialects are the three Hottentot idioms, known as the Nama or Namaqua on the west, the Khora or Khorana on the east, and the almost extinct Cape Hottentot in the south. Hottentot possesses twenty simple vowels, and about twelve diphthongs; its consonants, however, are deficient, and consist largely of gutturals. These are eked out by four clicks, dental, palatal, cerebral, and lateral, relics, it may be, of those animal cries out of which language arose. There are also three tones by which homonyms are distinguished, as in Chinese; the accent usually falls on the stem-syllable. Suffixes play a large part in the formation of words, roots being thus marked off from stems as in the Aryan languages, and the verbal stem is generally kept distinct from the nominal stem, though the distinction is not carried far, since the verb may drop its person-ending when the subject is a substantive. The noun has three genders—masculine, feminine, and neuter; three numbers—singular, dual, and plural; and two cases —nominative and accusative: all marked by different pronominal affixes, which also denote the persons. Thus for the second person singular the suffixes are in the nominative *-ts(i)* masculine, *-s* feminine, and *-ts* neuter,

in the accusative *-tsa*, *-sa*, and *-tsa*, but different suffixes would have to be used for the first or third persons. These suffixes may be attached one to another just as in our own family of speech, and they differ from those of the agglutinative languages in frequently being merely classificatory or even meaningless. At the same time it must be allowed that the flectional instinct cannot be strong, since there is no concord between the adjective and the substantive. As in so many other tongues, the dative and accusative are not distinguished from one another, but the genitive may be denoted by the demonstrative *di*. Present, aorist, future, and perfect tenses are formed by the help of suffixes, as are also passives, causals, reciprocals, and similar conjugations, and a large number of postpositions are in use. We see from this short sketch of Hottentot grammar that it resembles our own Aryan grammar in two important respects, the power of composition and the conception of three genders. Perhaps Bleek is right in thinking that the fondness of the Hottentots, or Khoïkhoïn, as they call themselves, for sidereal worship and beast fables is largely due to the character of their speech, in which everything must be personified by receiving the suffixes of gender. On the other hand, the natural home of the beast fable seems to have been among the Bushmen, from whom the Hottentots and other African peoples derived it. The beast fable we must remember flourished among the ancient Egyptians,[1] and there are many indications to show that the

[1] See Mahaffy: "Prolegomena to Ancient History" (1871), pp. 389-92, who thinks that the beast-fable made its first appearance in Egypt, having been derived from "the primitive Africans, who may

Hottentots have moved from the north, where they may once have been in near contact with the inhabitants of the Nile.

One more inflectional group of tongues remains to be noticed, the Alarodian of the Caucasus, of which Georgian is the chief living representative. Unlike Hottentot or Haussa, the inflectional character of Georgian is beyond dispute: indeed, morphologically, it is difficult to distinguish it from Aryan, although, genealogically, the two families of speech have nothing in common. It is probable that the cuneiform inscriptions of Van and its neighbourhood will turn out to be written in an extinct form of Alarodian speech, as spoken in Armenia before the arrival of the Aryan immigrants. Georgian boasts of no less than eight cases, including an instrumental and a demonstrative, and the personal pronouns have further a copulative case. A locative is formed by the post-position *chi*. The sign of the plural, *bi* or *ni*, is inserted between the stem and the case-endings, *thavi-sa*, the genitive of *thavi*, "head," for instance, being *thave-bi-sa* in the genitive plural. The ordinal numbers are formed from the cardinals by the help of the prefix *me*, like substantives which denote an office or profession. With the exception of words formed by the preposition *sa*, "for," however, most of the Georgian derivatives are created by the help of suffixes, *-eli*, *-uli*, and *-uri* denoting gentilic nouns, *-oba* or *-eba* abstracts, *-iani* adjectives, and *-k'i* diminutives.

have felt that the wisdom of the lower animals was equal to their own, and who had not acquired exalted notions of the inherent superiority of the human race." He notices that the first essays in composition made by the Vei Negroes after the invention of writing among them were fables.

The verbal conjugation is extremely complicated; there are several different forms, and a large number of tenses. Many of these incorporate the objective pronouns, and are able to lengthen themselves by the addition of what are now, at all events, unmeaning suffixes. The native grammarians are not far wrong in considering their language as *sui generis*.[1] Georgian literature is in large part ecclesiastical, but it comprises also several chronicles, romances, and poems, such as the "Story of Tariel," in 8,000 lines, besides a dictionary compiled by Prince Sulkhan Orbelian in the seventeenth century.

We have no reason for thinking that the inflectional groups of speech which are still spoken are the only specimens of this class of languages that have existed in the world. On the contrary, it is probable that there have been others which have disappeared, leaving no traces of themselves behind. The language of the Lykian inscriptions is as inflectional as Greek, but all attempts to connect it with the Aryan family have hitherto failed, and it is safest to look upon it as a waif and stray of an otherwise extinct family of speech. A fortunate accident has preserved for us a few old monuments in which we can study it; a still more fortunate accident has made some of these monuments bilingual. If Lykian continues resolutely to resist being forced into the Indo-European group, it will have to be classed with the mysterious Etruscan, as a relic of a lost system of speech whose kindred have all perished without memorial. Etruscan itself, in spite of its agglutinative character, wears so frequently an inflectional appearance that scholars of repute have

[1] De Brosset: "Éléments de la Langue géorgienne" (1837), p. v.

tried to compare it now with Semitic and now with Aryan. In this respect it resembles the Finnic idioms, where agglutination has so disguised itself under the mask of inflection as to tempt a scholar like Weske to suggest their inclusion within the Indo-European family. In fact, any distinction that can be drawn between the Finnic and the Aryan verb is a purely artificial one; the forms in both have originated in agglutination, and become what they are through the influence of phonetic decay. So far as form is concerned, there is little difference between the Ostiak *madâdm, madân, madâ; madau, madâr, madâda,* and the Sanskrit *bhavâmi, bhavasi, bhavati; abhavam, abhavas, abhavat.* In the declension, too, the postpositions have in many instances ceased to be independent or even semi-independent words; indeed, the marks of certain of the cases (the genitive *-n(a)*, the abessive *-ta*, the adessive *-l*, &c.) are throughout the Turanian or Ural-Altaic world mere symbols, whose origin has been long forgotten. But for all that the Finnic idioms remain agglutinative, the Aryan languages inflectional. The Aryan languages started with flection, and made their agglutinated compounds conform to the prevailing analogy; the Finnic idioms owe the appearance of flection which they possess to the wear and tear of time. In the one case analogy, in the other case phonetic decay has worked the change. The two groups of tongues have met, as it were, in the same spot, after starting from opposite quarters; and the fact need not surprise us any more than the common resemblance in many points presented by English and Chinese. After all, languages, however unallied, have all originated under

similar circumstances from men of similar mould; they are but varying species of one and the same genus. Hence that gradual passage from one form of speech to another, described in a former chapter, and that sporadic participation of one form of speech in the characteristics of another. We may discover the principle of flection in the agglutinative Dravidian of western India, where the Tulu dialect forms the frequentative *mālpēvé*, and the causative *mālpāvé* from the active *mālpuvé*, "I do," or in the Bâ-ntu of southern Africa, where the final vowel of the noun has a passive meaning if it is *-ŏ*, an active or causative one if *-i*, a neutral one if *-a*,[1] while in Mpongwe *mi kámba* is "I speak," *mi kâmba*, "I do not speak." In the Finnic languages we can actually trace a change of signification in a root accompanying a change of vowel, and so be reminded of our own distinction between *íncense* and *incénse*, *tórment* and *tormént*. Thus *karyan* is "to ring" and "to lighten;" *kar-yun* and *kir-yun*, "to cry," but *kir-on*, "to curse;" *kah-isen*, *koh-isen*, *kuh-isen*, "to hit" or "stamp;" *käh-isen*, *köh-isen*, "to roar;" *keh-isen*, *kih-isen*, "to boil."[2] What is this but the Semitic mode of indicating a change of signification by a change of vowel? The difference between the two is that the one utilizes the variation of vowel for lexical, the other for grammatical, purposes; it is the only difference, but, for determining the morphological position of a language, it is a most important one.

[1] Bleek: "Comparative Grammar of the South African Languages," p. 138.

[2] Donner in the "Z. D. M. G.," xxvii. 4 (1873).

CHAPTER VIII.

THE AGGLUTINATIVE, INCORPORATING, POLYSYNTHETIC, AND ISOLATING LANGUAGES.

"L'idée de l'infériorité des nations touraniennes, de leur inaptitude à l'art et à la civilisation, est un vieux préjugé qui a fait son temps, et qui ne doit guères son origine qu'aux affirmations vaniteuses, et surtout intéressées des nations germaniques." — FR. LENORMANT.

PUTTING aside the polysynthetic dialects of America, the majority of the languages of the world belong to the agglutinative class. But just as the inflectional families of speech differ one from another, so also do the agglutinative; indeed, there is a greater difference between the rude and unformed Bushman and the polished Finnic, with its semblance of flection, or the Dravidian of Western India, with its power of modifying the sense by internal vowel-change, than there is between any two groups of inflectional speech. Agglutination, too, may be of more than one kind. The agglutinated adjuncts may be either prefixed, as in Kafir, or affixed, as in Ural-Altaic; or, again, they may be almost wholly dispensed with, as in Malayo-Polynesian. The root may be modified in sound during the process of agglutination, or may remain fixed and unchangeable, whatever incrustations may attach themselves to it. A verbal stem may exist apart from a

nominal stem, or, as in Polynesian, a verb may not have emerged into existence at all. The root may influence the suffixes, producing that law of vowel harmony which assimilates the vowel of the suffix to the vowel of the root, or suffix and root may resemble two atoms in close contact which each keep their own unalterable character.

The important part played in history and civilization by the races who speak the various dialects of the Ural-Altaic or Turanian family makes a brief review of the leading languages of this family as necessary as a review of the Aryan or Semitic families of speech. From the eastern shores of Siberia to Scandinavia and western Russia extends a group of tongues which can all be traced back to a common mother speech. The Finns and Lapps of the North, the Esths and Ugric tribes of Russia, the Magyárs of Hungary, the Osmanlis of Turkey, the Tatars, the Samoieds, the Mongols, the Mantchus, and the Tunguses all share the fragments of a common patrimony. Possibly Japanese may have hereafter to be added to the list; for the present, however, it must remain isolated and unclassified. The oldest monuments of Turanian speech have been of late revealed to us by the cuneiform monuments of Babylonia; the wild hill-tribes of Media and Susiania, the citizens of the ancient empire of Elam, and the primitive population of Chaldea itself all spoke cognate languages, which, it would seem, must be assigned to the Ural-Altaic group. Already the same intellectual power which to-day distinguishes the Finn or the Magyár had begun to show itself; and the Accadians of primæval Babylonia were the inventors of

the cuneiform system of writing, the builders of the great cities of the country, the first students of mathematics and astronomy, and, in short, the originators of the culture and civilization which was handed on to the Semites, by whom they were afterwards conquered and dispossessed. Contemporaneous records prove that Western Asia possessed its China in Turanian Accad at least five thousand years ago; and that the "wisdom of the Chaldeans," stored up in their imperishable libraries of clay, was no imaginary dream of a later age, but a startling and solid fact.

Of course it does not follow that the communities which now speak the allied dialects of the Turanian family all belong to the same race. The Lapps, in fact, though now using a Finnic idiom, are not related to the Finns in blood, and it is more than doubtful whether we can class the Mongols physiologically with the Turkish-Tatars or the Ugro-Finns. It is even possible that the Mongolian dialects themselves were originally distinct from those of the Turanian group, and owe their present inclusion in the group to their common agglutinative character, and to a long and close contact with the Turkish-Tatar languages, which have made them approximate so nearly to the latter as to compel us to classify them together. However this may be, the whole Turanian family is bound together by its structure, its grammar, its stock of roots, and its law of vocalic harmony. It may be divided into five branches, the Finno-Ugric, the Turko-Tatar, the Samoyedic, the Mongolian, and the Tungusian, the first two representing the culti-

vated members of the family. The Accadians of Babylonia looked upon "the Mountain of the East," the present Mount Elwend, as the spot whereon the ark of the Chaldean Noah had rested, and as the cradle of their race; but it is very possible that this was but the first centre and starting-point of the extinct Chaldeo-Elamite branch, the original home of the whole family really lying far to the north-west among the slopes of the Altai range.

The Finno-Ugric or Uralic dialects are divided by Prince L-L. Bonaparte into four sub-families, the Chudic, the Permian, the Volgic, and the Uigur. The Chudic sub-family is again divided into two branches, one branch being the Finnic, comprising Finnish, Vêpse, Vote and Karelian, Esthonian and Krevingian, and Livonian with the extinct dialect of Salis and the dialects of Kolken and Pisen, while the other branch is the Laponic, in which Lappic holds a solitary place. The Permian is spoken in the north-east of Russia, and includes Permian proper, Zyrianian, and Votiak. Volgic branches off into Cheremissian and Mordvinian (with its two dialects) on the Volga, and Uigur into Ostiak, Vogul and Magyár or Hungarian, once spoken on the banks of the Obi. The researches carried on of late years into the Uralic languages have not only demonstrated their close affinity and common origin, but also a system of equivalence of sounds similar to that known as Grimm's law. Thus Riedl has established the following table of consonantal permutations for the Magyár :—

$k = kh = h$; $h = j$; $g = gj$; $g = d$; $n = \dot{n} = g = k$; $j = gj$; $j =$

nj; j = v; l = j = gj; l = n = r; t = d = l = t; d = z; t = s; n = gj; m = þ; av = o; ev = ö; iv = ü.[1]

The same method of comparison which has been so successfully applied in the case of the Aryan tongues has also revealed to us the civilization and migrations of the primitive Uralic tribes, as well as their indebtedness to their Aryan neighbours. There was a time when the Finns had not yet penetrated to the snows of the far north, when they still bordered on Slavonic, Scandinavian, and German populations to whom they lent some words and from whom they borrowed more. Thus Thomsen has shown us that the Finnic *raippa*, "rope," is the Old Norse *reip*, the Swedish *rep;* the Finnic *laukka*, "a leek," the Old Norse *laukr;* the Finnic *penkki*, "a bench," the Swedish *bänk;* the Finnic *nuotta*, "a net," the Old Norse *nót;* the Finnic *paita*, "a shirt," the Gothic *paidha;* the Finnic *patja*, "a mattress," the Gothic *badi*.[2]

Ahlqvist has followed in the same track and sketched the condition of the Finnic tribes when they first settled in Europe and learned the arts of agriculture and cattle-breeding from their neighbours, the Teutons and the

[1] So, according to Erman, in Kazan Tatar *g* becomes *t* in Yakute.

j (*y*)	„	*t* and *s*
z	„	*b*
sh	„	*s*
ju	„	*bju*
a	„	*iu, oe*
e	„	*ui*
ui	„	*je*
aimen	„	*ubiun*

See above, pp. 325-6.

[2] "Ueber den Einfluss der germanischen Sprachen auf die finnisch-lappischen" (transl. by Sievers, 1870).

Slavs. Before their contact with the latter, they were turf-cutters rather than agriculturists, numerous words existing in the various dialects which signify turf-cutting, but none of native origin which signify "a field." The plough (*aura* for *aatra*) was borrowed, it would seem, from the Goths, and the only cereals which have native names are the barley (*ohra, otra*) and the turnip (*negris*). So, too, the words for "cattle" and "swine," *nauta* and *sika*, come from the Norsk *naut* and *sugge*, while the name of the "horse," *hepo* or *hevonen*, is the Swedish *häppa*, the Danish *hoppe;* and that of the "sheep," *lammas*, the German *lamm*, our *lamb*. The names of the stallion, the mare, the cow, and the bull, on the other hand, are all of native derivation, and prove that these animals must have been known to the Finns before their contact with the Aryans. Like the other members of the Ural-Altaic family, the Finns were acquainted with metallurgy from an early period; indeed they seem to have used iron long before any of the Aryan tribes. Meteoric iron was probably the first worked, and it is curious that the Accadian of Babylon prefixes the determinative of divinity to the name of the metal as if to point out its heavenly descent. The smiths of the ancient legends are all divine beings, and the adventures of the Finnish Wäinämöinen, the old limping smith of heaven and earth, and his friend Ilmarinnen, "the divine blacksmith,"[1] or the fall of the Greek Hephæstus from the sky, appear to symbolize the origin of the first

[1] M. Fr. Lenormant has very happily compared Wäinämöinen with the Accadian Ea. See "La Magie chez les Chaldéens," pp. 219-37.

specimens of the metal. The Finnic word for "copper," *vaski*, is identical with the Magyár *vas*, and shows that this metal must have been known to the ancestors of the Finns and Hungarians before their separation. The terms that denote "silver," too, are native, though differing in the various dialects, but gold has received a German name in Finnic and a Persian name in Magyár. Since it seems to have been a possession of the undivided Ural-Altaic community, we may argue that a knowledge of it was lost by the Finns and Hungarians during their wanderings to the north and the west.

Much advance was made in civilization even after the Finns had parted from their Esthonian kindred. The Esthonians before their arrival in the region of the Baltic were but hunters and fishers, making neither butter nor cheese, though in possession of dogs, horses, and oxen. They first became acquainted with the sheep, goat, and pig when in the neighbourhood of the sea-coast. Here, too, wheat, rye, oats, pease, beans, and lentils were first grown. In an earlier age only barley and turnips had been sown on the clearing made by cutting down the trees and undergrowth for firewood. The huts of the people were built of branches laid against a tree or rock and covered with skins, with two openings, one for a door and the other to let out the smoke; their steam-baths (*saun*) were constructed simply of holes in the earth, and their clothes were made of skins, the hair being turned inside for the sake of warmth. The skins were stitched together by the mistress of the house with bone needles, the threads being formed from the fibres of a kind of nettle, and dyes were used to colour them. The husband employed

his time at home in making fish-hooks, hunting-gear, and the like; the instruments being generally of stone, though copper and silver were likewise used. The iron axe was first known on the shores of the Baltic, where, too, the river-boats without sails were exchanged for stronger and more capacious ones. The reindeer, however, was still the chief means of locomotion, as it had been before the period of separation. From the first, too, the tribes had lived in communities, each under a war-leader (*wanem*), who was elected from time to time. Individual freedom was, however, highly prized, and the community accordingly did not exercise the despotic power it enjoyed among the primitive Aryans. There were neither judges nor laws, but family life was complete and well organized, slavery was unknown, and skins (especially those of the squirrel) formed the medium of exchange.[1] Turning to the south, we find a similar state of society among the ancestors of the Magyárs, before they had yet left their kinsmen in the Ural mountains. They possessed houses and villages, but mainly lived by hunting and fishing. They had the dog and the horse, but apparently no cattle. They could braid, weave, and knit, and were acquainted with gold, silver, lead, zinc, and iron. Indeed, their goldsmiths and silversmiths were already of repute. Cobblers, furriers, turners, tailors, wheelwrights, harness and rope makers, with their tools and trades, all have Magyár names, and beer was drunk on holidays. Like the Turks, their numerals were based on a septimal system, and thirteen months,

[1] Ahlqvist and Blumberg ("Sitzungsberichte der gelehrten estnischen Gesellschaft zu Dorpat," 1876, p. 149).

of twenty-eight days each, made up the year, at the end of which came an intercalary day. As among the Accadians, the months were divided into weeks of seven days. It was from the Turks, however, that these primitive Ugrians learnt a large part of the elements of civilized life. The names of the ox, the calf, the sheep, the pig, and the hen, are of Turkish origin, as is also all that has to do with agriculture—harvest, stubble, sickle, wheat, barley, apples, sowing, reaping, and grinding in the mill. From Turkish, too, are borrowed the names for axe, door, mirror, thimble, ring and pearl, as well as words for demon, witness, wine, and writing. Even the Magyár name of the sea, *tenger*, comes from a Turkish source, from which, perhaps, we may infer that the forefathers of the Hungarians lived in the most southerly part of the district occupied by the Ugrian tribes, the rest of whom have a common term for the sea of home growth. The same fact is further indicated by the Turkish derivation of the words used by the Magyárs for such southern animals as the lion, camel, badger, and bustard. The Turkish dialect laid under contribution, however, was not the Osmanli, but the Shuvash, which makes it clear that the advance in civilization had been made by the Magyárs before they had settled in Hungary, and probably while they still occupied their original seats.[1]

We have yet to learn what was the civilization of the primitive Turkish-Tatar horde, or of that people of the remote past, who spoke the parent-language of Ural-Altaic

[1] Hunfálvy: "Magyarorzság ethnographiája," in the Transactions of the Hungarian Academy, 1876, pp. 221-75.

speech, it may be, before the Accadians had descended southwards and under the favouring influences of a southern sun developed the civilizations of Elam and Chaldea. Already, however, it would seem, the religious and poetical tendencies of the race had begun to display themselves. Ural-Altaic religion is essentially Shamanistic; every object and force of nature is believed to be inspired by a spirit, sometimes beneficent, sometimes malevolent, but the spirit can be approached only by the qualified sorcerer or shaman. A belief in magic and witchcraft lies at its very roots. It is strange that by the side of such a religion there has existed a rich mythology, mostly solar, and the creator of numberless lays and epics. The Finnic Kalévala is an epic worthy of comparison with Homer or the Nibelungen Lied. Its 22,000 verses, it is true, were redacted into a whole by Lönnrot and Castrén only within the present century, but the popular lays which compose it, though of varying age, all refer to the same cycle of mythology, to the same heroes, and the same legendary facts. The adventures of the three divine smiths—Wäinänöinen, Ilmarinnen, and Lemmakainen or Ahti, their travels in the underground world of Pohiola, their final struggle with Luhi, "the hostess of Pohiola," and their search for the mysterious Sampi are equal in interest and imagination to the best products of national genius found elsewhere.[1] Similar

[1] The Kalévala has been edited with introduction and glossary by F. W. Rothsen (1870). A. Schiefner has published a German translation (1852), Léouzon-le-Duc a French translation (1868; see also his "La Finlande," 1845). Latham has given an abstract of it in his "Nationalities of Europe," vol. i. pp. 182-209 (1863). Castrén's "Vorlesungen ueber die Finnische Mythologie," translated

to the Kalévala is the Kalevipoëg of the Esthonians, which, however, still wants its Lönnrot to make it thoroughly complete. The groundwork of the poems which make up the Esthonian epic is identical with that of the Kalévala, and show that the Finns and Esths started with a common stock of ancestral myths. The half-savage Ugric Voguls of the Ural, too, have their epic, consisting of long poems on the Creation, the Deluge, and the giants of the ancient world, which have recently been made known to us (in 1864) by Hunfálvy.[1] It is very remarkable to find these myths of a wild secluded tribe on the barren slopes of the Ural strikingly resembling those of the cultivated Accadians of primæval Babylonia. The legends of the Creation and the Flood, which were translated by the Semitic Babylonians into their own language after forming part of a great national epic, have been recovered from the buried library of Nineveh, and show to what a vast antiquity these old Altaic myths must go back. Even the Lapps have their mythical epic,[2] in which they relate how Päwin parne ("the Son of the Sun"), "the offspring of Kalla" (? Kaleva), along with his brother giants used the Great Bear as his bow, and hunted and tamed the heavenly stags—Jupiter "the bright stag," and Venus, "the colour-changing hind"—in the constellation Cassiopeia; how Paiven neita ("the Sun's Daughter") bestows her reindeer and all her goods

into German and annotated by Schiefner (1853), should also be studied.

[1] See the summary of this "Vogul Genesis," given by M. Adam in the "Revue de Philologie et d'Ethnologie," i. 1 (1874), pp. 9-14.

[2] See Donner: "Lieder der Lappen."

on him who can catch her unawares; and how a hero, born after his father's murder, asks his mother for his father's name, and slays the murderer in single combat. The myths and tales of the Tatars are equally numerous, and those who care to read Castrén's collection of them may discover a reflection of the Sun-god in most of their heroes whose names are compounded with the term for gold. In short, throughout the Ural-Altaic family we find a rich outgrowth of myth and legend, and the agglutinative character of the language, and the consequent transparency of the proper names, make it easy to trace their original meaning. Ural-Altaic poetry is, like Assyrian and Hebrew, parallelistic, and mostly in the metre made familiar to us by Longfellow's "Hiawatha."

The Turkish-Tatar languages may be classed as Yakute, Kirghiz, Uigur, Nogair, and Osmanli. The Yakutes live in the midst of the Tungusian tribes of North-eastern Siberia; the Kirghiz, divided into the Black Kirghiz or Burut and the Kazak Kirghiz, in Chinese Turkestan and the neighbourhood of the Aral; the Nogairs or Russian Cossacks, in the Crimea and the district of Astrakhan; while the Uigur, with its sister-dialects of Yagatai and Turkoman, had an alphabet of its own as early as the fifth century, and once produced a considerable literature. Osmanli, with the outlying Shuvak south-west of Kazan, is the tongue of the dominant race of Turkey, and though the literary dialect has borrowed a large part of its vocabulary from Persian and Arabic, the country dialects are comparatively pure. The Turkish verb, like the Finnic, is exceedingly rich in

forms ; suffix may be piled upon suffix so as to represent the most minute and varied differences of meaning. Both root and suffix, however, always remain clear and marked ; hence the transparency which characterizes the conjugation and makes it so perfect an instrument of logical thought. A periphrastic conjugation is also in use in which various participles are combined with the auxiliary *to be*, and the number of verbal forms is thereby greatly increased. Turkish literature is copious ; but perhaps the best known work is the " History of Nasr-il-Dîn Khoja," a sort of Turkish Eulenspiegel.

Midway between the Finnic and Turkic idioms may be grouped the Samoied dialects, our knowledge of which is in large measure due to the self-denying devotion of Castrén. They stretch along the shores of the White Sea and North-west Siberia, and comprise five main dialects, which are, however, split up into an infinity of smaller ones. Yarak is spoken in European Russia and as far as the river Yenisei, Yenisei Samoied on the banks of the Lower Yenisei, Tagwi further to the east, Ostiak Samoied on the Obi, and Kamassic in Southern Siberia. Ostiak Samoied and Yenisei Samoied must be carefully distinguished from Ugrian Ostiak and Yenissei Ostiak, which is allied to the Kot (or Kotte), and with it forms a stray fragment of what is apparently an otherwise extinct family of speech. The Samoieds are perhaps the most degraded of all the members of the Ural-Altaic family, more so, certainly, than the Mongols. The latter speak three principal dialects—the Eastern or Sharra, spoken in Mongolia proper, the Western or Kalmuk, stretching westward into Russia between the Kirghiz

and Nogair. Turks, and the Northern or Buriat in the neighbourhood of Lake Baikal. The latter is the most barbarous of the Mongol idioms, the others being more or less cultivated. The pronouns in Mongol have not amalgamated with the verb, as they have in Finnic or Turkic; thus in Buriat *bi bis* is "I am;" *shi bis*, "thou art;" *ogon bis*, "he is;" *bi yaba*, "I was;" *shi yaba*, "thou wast;" *ogon yaba*, "he was;" *bi bilei*, "I have been;" *shi bilei*, "thou hast been;" *ogon bilei*, "he has been."

Closely allied to Mongol is Tunguse, in the centre and extreme east of Siberia, divided into the three branches of Mantchu, Lamutic, and Tungusian. Of these Mantchu has become the best known in consequence of the Mantchu conquest of China. The Mantchus, however, have long possessed a literature, their alphabet of twenty-nine characters having been originally introduced by Nestorian Christians. Contact with Chinese, and perhaps also literary cultivation, have had the same effect upon Mantchu that similar influences have had upon English; the sign of number has been lost, like the possessive pronoun affixes, and to find them we must look to the ruder Lamutic and Tungusian. The harmony of the vowels, too, that distinguishing feature of Ural-Altaic speech, is reduced to small dimensions in the Mantchu dialect, and the possessive pronouns are not affixed. The adjective simply consists of a noun placed before another to qualify it, like our *wine merchant*, and properly speaking there is no verb signifying "to have."

The chief distinguishing feature of the Ural-Altaic family is the so-called law of vocalic harmony. The

vowels are divided into strong and weak, certain dialects also possessing neutral ones, the general rule being that all the syllables of a word must have vowels of the same class, that is, either strong or weak. This rule, however, is not carried out strictly in all the members of the family; sometimes only the affixes are affected by it; sometimes all the elements of a compound word must come under its operation. In some dialects, the Vêpse, the Esthonian, and the Votiak, for example, the law is neglected altogether; but this must be regarded as the result of phonetic decay, and not as a survival of a more primitive condition of speech, in which the vocalic harmony did not exist, since, as Donner has pointed out, roots of allied meaning in the Finnic group are frequently distinguished from one another simply by a difference of vowel, thus *kah-isen*, *koh-isen*, *kuh-isen*, with strong vowels, mean "to hit" or "stamp;" but *käh-isen*, *köh-isen*, with weak vowels, "to roar." The classification of vowels into strong and weak must, therefore, have been adapted to the differentiation of meaning at an early period. No doubt, however, when once the distinction had been set up it tended to spread and develop; Riedl and Adam have shown, for instance, that in the oldest Magyár texts anti-harmonic forms are common, as *halál-nek*, "at death," *tiszta-seg*, "purity," and that before the twelfth century compounds were but little subjected to the law. At the present time, in Magyár, as in Turkish, Finnish, Mantchu, and Mongol, the vowels of the whole word must be brought into harmony, whereas in Mordvin or Siryänian it is only those of the last syllable. The following is a classification of the

vowels in the principal languages of the Ural-Altaic family:[1]—

The origin of this division of the vowels is to be sought in the phonetic tendency to anticipate a following vowel in a word by assimilating an earlier one to it, as in the German *umlaut*, or, conversely, to harmonize the vowel of the next syllable with one that has just been uttered. The latter assimilation would naturally be adopted by speakers who accented their words at the beginning instead of the end, as did the Aryans. As Sievers suggests, "it is a question whether a connection does not exist between the different forms assumed by assimilation and the accentuation of words. At all events, the accentuation of the first syllable of the word in the Ural-Altaic languages would agree with such a view."[2]

Affixes, and not prefixes, characterize Ural-Altaic agglutination. The noun has some eight cases, the principal among them being marked by the terminations, *-n* or *-na*, *-l* or *-la*, *-s* or *-sa*, the origin of which is rendered obscure by their antiquity. The other relations of the noun are expressed by simple or

[1] Adam: "De l'Harmonie des Voyelles dans les Langues uralo-altaïques" (1874).

	Strong.	Weak.	Neutral.
Finnish	*u, o, a*	*ü, ö, ä*	*e, i*
Magyár	*u, o, a*	*ü, ö*	*e, i*
Mordvin	*u, o, a*	*ä, i*	—
Siryänian or Zyrianian	*ô, a*	*ä, i, e*	—
Turkish	*u, o, a, ê*	*ü, ö, e, i*	—
Mongol	*u, o, a*	*ü, ö, ä*	*i*
Buriat	*u, o, a*	*ü, ö, ä*	*e, i*
Mantchu	*ô, o, a*	*e*	*u, i*

[2] "Grundzüge der Lautphysiologie," p. 137.

compound words, agglutinated at the end; and these, though amalgamated with the noun into a single whole, by the action of vocalic harmony, nevertheless, in the majority of instances, maintain their original and independent signification. They are, in fact, other nouns attached to the first, in order to limit its meaning and reference. In the Finnic idioms, the amalgamation has become so complete that it is difficult to trace either the original meaning or the original form of the agglutinated nouns; and, except for their number and uses, forms such as the Votiak *murtly*, "to a man," or the Magyár *atyá-nak*, "to a father," might easily be taken for the cases of the Aryan declension. In the verb, too, the same amalgamation has taken place, and it is difficult at first sight to distinguish the Ostiak forms quoted above [1] from the persons of the Sanskrit vérb. A closer investigation of the language, however, reveals the fact that the Ugro-Finnic verb, like the Ugro-Finnic noun, is virtually based on the same principles as the verb of Osmanli Turkish. This displays the analytic genius of Ural-Altaic speech at its best. The forms of the Turkish verb are at once clear, simple, and minute. *Sevmek*, "to love," where *mek* is the sign of the infinitive, becomes reflective by the addition of *in* (*sev-in-mek*), reciprocal by the addition of *ish* (*sev-ish-mek*), causative by the addition of *dir* (*sev-dir-mek*), passive by the addition of *il* (*sev-il-mek*), and negative by the addition of *me* (*sev-me-mek*), and all these forms can be united together, so that, for instance, *sev-ish-dir-il-mek*, an amalgamation of the reciprocal, the causative, and the passive, means "to be

[1] Page 186.

brought to love one another," *sev-in-dir-il-me-mek*, "not to be made to love oneself." But the mechanism of the Turkish verb is almost equalled by that of the ancient Accadian; thus *gar-mu* is "I made," *gar-dan-mu*, "I caused to make," *gar-dan-ra-mu*, "I caused one another to make," *gar-dan-nu-mu*, "I did not cause to make." In fact, from the very first, the Turanian or Ural-Altaic languages have been characterized by a perspicacity and logical vigour, which enable us to understand how their speakers could have been the originators of the culture and civilization of Western Asia. In disregarding the distinctions of gender, in analyzing the forms of speech, in making each word tell its own tale, and in assigning one definite signification to each element of their grammatical machinery, the Turanian languages resemble English, and like the latter mark a high level of intelligence and power.

More involved and delicate is the mechanism of another family of agglutinative speech—the Dravidian of India. It would seem that the Dravidians entered India before the Aryans, but by the same road from the north-west, and, like the Aryans, successfully established themselves among the Kolarian and other aboriginal races. The Dravidian dialects are twelve in number, six (Tamil, Malayâlam, Telugu, Kanarese, Tulu, and Kudagu) being cultivated, and six (Toda, Kota, Khond or Ku, Gond, Oråon, and Rajmuhâli) being spoken by barbarous tribes. Tamil literature is especially abundant, though a good deal of it is borrowed or adopted from Sanskrit sources. It is mostly in verse, moral poems and didactic saws constituting its most ancient portions, the lyrics, epics,

and dramas being of later date. Unlike Telugu, Kanarese, and Malayâḷam poetry, Tamil poetry is in large measure free from foreign words. Dravidian phonology is chiefly distinguished by the occurrence of cerebral letters, which Bishop Caldwell believes to have been handed on to the Aryans; every *r*, again, must be preceded by a vowel, while a soft explosive cannot begin a word, nor a hard explosive stand as a single consonant in the middle of a word. Modifications of sense are produced by suffixing the vowels *a*, *e*, *i*, otherwise the relations of grammar are almost entirely expressed by affixes. The power of agglomerating these suffixes one after the other into a single word far exceeds that possessed by the Turanian tongues, and reminds us of our own English conglomerates, such as "Employers' Liability for Injury Bill." Thus in ancient Tamil poetry, *sârndâykku* means "to thee that hast approached," composed of *sâr*, "to approach," *d*, sign of the past, *ây*, the verbal suffix of the second personal pronoun, and *ku*, the postposition "to." There is no verb "to be" or "to have," but any noun can easily be turned into a verb by means of the suffixed pronoun; the Tamil *tevarir*, for instance, is "you are God," *tevair* being the honorific plural, and *ir* the termination of the second person of the verb. The verb has only three tenses—present, past, and indefinite future,—and the indicative is its sole mood. A masculine and feminine gender, however, are distinguished in nouns which denote adults, and the accusative is marked by the termination *-ai* or *-ei*, the genitive by the termination *-in*. As in Aryan and Semitic languages, a difference of signification may be symbolized by internal vowel-change;

thus in Tulu, *mâlpuvé* is "I do," but *mâlpêvé* (frequentative), "I often do," *mâlpâvé* (causative), "I cause to do," *mâltruvé* denoting the intensive, and *mâlpâvuyi* the negative.

In the Malayo-Polynesian group, the agglutinative elements may be placed after the root, or even inserted in the body of it, but they are more commonly prefixed. Prepositions accordingly take the place of postpositions, and a prefixed article occupies a prominent position. Reduplication, also, is largely employed; thus, in Malay, it serves to mark the plural, as in Bushman, and throughout the Polynesian dialects the verb makes considerable use of it. The verb, however, properly speaking, has hardly come into existence; "his house has many rooms," for instance, would be in Dayak *luma-e bakaron dră*, literally "his-house with-rooms many;" "thy boat is very beautiful," *kotoh ka-lalap-e arut-m*, literally "very its-beauty thy-boat." Phonetic decay has played great ravages in the whole of this family of speech. The alphabet is reduced to the simplest elements, and every consonant must be accompanied by a vowel. The general resemblance pervading the scattered dialects of Polynesia proves that this decay must have set in before the brown race settled in the Polynesian islands. The language spoken at the time, however, was not Malay, as has sometimes been supposed, but an offshoot of the same parent speech as that from which both Malay and the idioms of the Indian Archipelago are descended. The Polynesians present us with the spectacle of a race which has declined in civilization, of which their numerous songs and legends are a last relic. The Malays, on

the other hand, have enjoyed a considerable culture for generations. Their poetry, which comprises epics and dramas, is indigenous, as are also their romances, though their philosophic writings are due to contact with Hindus and Arabs. Javanese literature is similarly indebted to Sanskrit, but its poetry, fables, and traditions are of home growth.

The Bâ-ntu family of languages in Southern Africa marks the relations of grammar by prefixes only. These were originally nouns, which in course of time became pronouns, and then mere classificatory prefixes, and their number, as well as the regular but delicate phonetic changes which they undergo, render the Bâ-ntu declension and conjugation at once rich and complicated. The noun is divided by means of them into a great variety of classes, called genders by Dr. Bleek, the same noun having a different prefix for the singular and the plural, and both the adjective and verb with which it is construed being furnished with the same prefix, and so placed in the same class. Thus in Zulu Kafir we should have in the singular *u*-MU-*ntu* W-*etu o*-MU-*khle* U-*ya-bonakala si*-M-*tanda*, "man ours handsome appears, we-him-love," in the plural *a*-BA-*ntu* B-*etu a*-BA-*khle* BA-*ya-bonakala si*-BA-*tanda*. Zulu has fifteen of these classificatory prefixes, while Otyihereró has as many as eighteen. As might have been expected in a group of tongues which displays so acute a perception of phonetic differences, a passive, active, or neutral signification is frequently given to nouns by their terminating respectively in the vowels *o*, *i*, and *a*,[1]

[1] Bleek: "Comparative Grammar of the S. African Languages," p. 138 (*note*).

and in Mpongwe while *tánda* means "to love," *tânda* is "not to love." The signs of case are of course prefixed, like the signs of tense and voice; in Zulu, for example, *ng-omuntu* is "with the man," *ng-abantu* "with the men."

Many of the agglutinative languages are more or less incorporating; thus we have just seen that the objective pronoun in the Zulu *si-m-tanda* comes between the subject and the root, and several of the Turanian languages have an "objective conjugation," in which the objective pronoun is intercalated between the verb and its subject pronoun. In Magyár, for instance, besides *hallok*, "I hear," *hallasz*, "thou hearest," *hall*, "he hears," we have *vár-om*, "I expect him," *vár-od*, "thou expectest him," *vár-ya*, "he expects him," where the objective pronoun may be either singular or plural. In Mordvin and Vogul, however, a difference is made between the forms *sodasa* and *kietilem* with the singular pronoun, and *sodasaïna* and *kietiänem* with the plural. Mordvin and Vogul also have special forms for the second personal pronoun when used as an object, *sodatä* and *kietilem* being "I eat thee," *sodatädäz* and *kietänem*, "I eat you."[1] Mordvin is able to go even yet further in the creation of objective forms, *sodasa-m-ak* being "thou eatest me," and *sodatama'st*, "thou eatest us." But these forms can easily be decomposed into an amalgamation of the verb with two personal pronouns, one employed as object, the other as subject, and so scarcely differ from the French *je vous donne*, which, though written as three separate words, is

[1] Magyár can also incorporate the objective second person when the subject is the first person, as *vár-l-ak*, "I await thee."

pronounced as though it were one. Still more analogous are such Italian expressions as *portandovelo*, "carrying it to you."[1] There is nothing in all this which reminds us of the intercalation of a word or syllable into the middle of a root, such as meets us in the Malay *k-um-akan* from *kakan*, "to eat," or the Sanskrit *yu-na-j-mi*, "I join." It merely indicates a peculiar syntactical habit, that is all.

But the case is altered when we find this principle of incorporation characterizing not only two or three isolated verbal forms, but all the forms of the verb, and admitting also the intercalation of a syllable denoting plurality. The Basque or Escuara dialects are the sole living representatives of a consistently incorporating language. Four of these dialects—the Labourdin, the Souletin, the eastern Bas-Navarrais, and the western Bas-Navarrais—are spoken in France; four others—the Guipuzcoan, the Biscayan, the northern Haut-Navarrais, and the southern Haut-Navarrais—in Spain; and Prince L-L. Bonaparte further subdivides them into twenty-five sub-dialects, among which may be specially mentioned those of Roncal and Irun.[2] The Souletin has borrowed the French *u*; elsewhere the vowels are those of Italian. *R* is not allowed to begin a word, and Prince L-L. Bonaparte has discovered what may be termed a law of vocalic harmony. A hard final consonant is dropped before an initial soft one, which then becomes

[1] It is true that *ve* (*vi*) is really the adverb *ibi*, but since it is used here pronominally it may be regarded, so far as sense goes, as genuine a pronoun as are the dative pronouns in the Basque verbal forms to be noticed presently.

[2] "Le Verbe Basque," p. 4.

hard; double consonants are unknown; *g*, *d*, *b*, *n*, and soft *r* disappear between two vowels, and *k*, *t*, and *p* before a nasal. The cases are formed by postpositions which may be added one to the other, and in the modern dialects[1] the singular is distinguished from the plural only in the definite declension, where the postfixed article is *a* in the singular and *-ak* in the plural. This article is still used as a demonstrative in Biscayan. The singular, when used as a subject, also takes a final *-k*, but the singular *jaunák*, "the master," is distinguished from the plural *jaúnak*, "the masters," by the position of the accent. The verb constitutes the great difficulty of Basque, and made Larramendi entitle his Grammar "El Imposible Vencido," "the Impossible overcome;" and this difficulty is occasioned by the incorporation of the pronouns which have been fused with the verb-stem into a compact whole by the action of phonetic decay. Although there are practically but two verbs—"to be" and "to have"—all other verbs being generally used as participles, the number of forms possessed by these is almost endless. Not only is there a different form for each of the personal pronouns, whether in the objective or the dative case, but there are also different forms for addressing a woman, an equal, a superior, or an inferior.[2] Thus, in the

[1] The analysis of the verb shows that one way of forming the plural was once by the help of the postfix *t(e)*. See Vinson's "Essai sur la Langue basque par M. Ribáry," p. 109. M. Van Eys by his discovery of the change of *k* into *t* has been enabled to show that this postfix *t(e)* is identical with the old symbol of the plural *-k* ("Grammaire comparée des Dialectes basques," pp. 15, 16).

[2] The form which denotes respect incorporates the plural second personal pronoun *zu*, and except in the second person is found only

indefinite conjugation, that, namely, used when an equal is addressed, we have *det*, "I have it," *ditut*, "I have them," *nuen*, "I had it," *nituen*, "I had them," *izango nuke*, "I should have it," *izango nukean*, "I should have had it," *izan dezadan*, "I may have it," *izan nezan*, "I might have it," *izan dezaket*, "I can have it," *izan nezakean*, "I could have it," *izan nezake*, "I could have had it," *aut*, "I have thee," *zaitut*, *zaituztet*, "I have you," *zinduztedan*, "I had you," *dizut*, "I have it for thee," *dizkizut*, "I have them for thee," *dizutet*, "I have it for you," *dizkizutet*, "I have them for you," *diot*, "I have it for him," *dizkiot*, "I have them for him," *diet*, "I have it for them," *diozkatet*, "I have them for them," *nazu*, "thou hast me," *gaituzu*, "thou hast us," *didazu*, "thou hast it for me," *dizkidazu*, "thou hast them for me," *diguzu*, "thou hast it for us," *dizkiguzu*, "thou hast them for us." When we examine the few verbs, other than the two auxiliaries, which are still conjugated, the analysis of these multitudinous forms becomes plain. Thus, if we take *ekarri* or *ekarten*, "to carry," we shall find *d-akar-t* signifying "I carry it," *d-akar-zu*, "thou carriest it," where it is clear that the initial dental is a relic of the objective pronoun, *t* and *zu* being the affixed subject-pronouns. So, again, *d-akar-zki-t* is "I carry them," *d-akar-zki-zu*, "thou carriest them;" where *zki* is the sign of plurality. *Zki* appears as *zka*, *tza*, and *tzi* in other dialects; thus, in Labourdin, *d-aki-zka-t* is "I know them," in Guipuzcoan *d-aki-tzi-t*, while Biscayan presents

in the Souletin and eastern Bas-Navarrais, which often substitutes it for the form used when addressing an equal (Vinson's "Ribáry," p. 106).

us with the form *d-aki-da-z*, in which the plural suffix (*z*) occupies a different place.[1]

The incorporation of the pronouns characterizes a language in which the intelligence of the speakers is still sluggish. A mere hint is not sufficient to convey the meaning; the object as well as the subject must be emphasized in order to be clearly indicated. The emphasis is obtained by adding the pronoun after the noun to which it refers: it is not sufficient to say "John killed the snake;" the needful definiteness is secured by saying "John the snake he-killed-it." The same usage characterized the Old Accadian of Chaldea; here, too, as in Hungary and Northern Russia, the pronouns could be incorporated, and by the side of *gar-mu*, "I made," we find the more common *gar-nin-mu*, "I made it." Even Semitic was no stranger to the practice of pleonastically repeating the pronoun; thus in Assyrian it is by no means unusual for a noun in the objective case to be followed by a verb with the pronominal suffix *-su*, "it" or "him." After all, the incorporation of the objective pronoun is only one step further than the incorporation of the subject pronoun which meets us in the much-vaunted classical languages of our own family of speech, if the theory is right which refers the termination of the third person of the verb to a demonstrative pronoun. It seems more probable, however, that the third person of the Aryan verb is but an abstract noun, like the third person in Tatar-Turkish, where *dogur*, "he strikes," is really the

[1] Vinson's "Ribáry," &c., p. 109. For the analysis of the verbal forms and the origin of the verbal roots see W. Van Eys: "Grammaire comparée des Dialectes basques" (1879).

participle "striking," and *dogd*, "he struck," the abstract "a striking," or like the third person of the Semitic verb, which similarly is a participle in the perfect and an abstract in the imperfect.[1] But even so, in the first and second persons the Greek was obliged to repeat the personal pronouns if he would express the subjects ἐγω and σὺ (ἐγώ τίθη-μι, σὺ-ἐσ-σι).

The Basque vocabulary confirms the inference drawn from the structure of the language. Here, too, there is a poverty of imagination, a backwardness of intelligence. It is hardly an exaggeration to say that two-thirds of the lexicon are borrowed from French and Spanish, or from the earlier Latin and Keltic. Abstracts of native growth are rare in the extreme, and though there are names for various kinds of trees and animals, there is no simple Basque word for *tree* and *animal* themselves. This is the more noticeable when we remember that Basque shows a great facility for composition, and in some cases its compounds are welded together, as in the polysynthetic languages of America, by dropping parts of the component elements. Thus *illabete*, "month," seems to be a compound of *illargi-bete*, "full moon," *illargi*, "moon," itself being composed of *il* or *hil*, "death," and *argi*, "light," and *orzanz*, "thunder," is similarly derived from *orz*, "cloud," and *azanz*, "noise." It is unfortunate that our knowledge of Basque is so recent. The native songs and "pastorals" are of late date, and the oldest printed book, the poems of Dechepare,[2] was only published in

[1] Sayce: "The Tenses of the Assyrian Verb," in the "Journal of the Royal Asiatic Society," Jan. 1877.

[2] See the "Édition Cazals," Bayonne (1874).

1545. The French Basques appear to have crossed the Pyrenees since the Christian era, and though Wilhelm von Humboldt endeavoured to find traces of the Basque language in the local names of ancient Spain, Southern Gaul, the Balearic Islands, and even Italy, his facts and conclusions have been strenuously controverted by MM. Van Eys and Vinson.[1] It is certain that the transformations undergone by local names make it very unsafe to argue from them, and an inscription in an unknown language found at Castellon de la Plana, and written in a form of the Keltiberian alphabet shows no resemblance to Basque. But it must be remembered that the modern dialects necessarily wear a very different appearance from their ancestors of two thousand years ago, and that the name of the colony established by Gracchus in Northern Spain—*Graccurris*, "the town of Gracchus"[2]—implies that a language was even then spoken in the neighbourhood of the Pyrenees, which contained a word for "city" resembling the modern Basque *iri* or *hiri*. The ethnologists have unfortunately brought the term Iberian into disrepute by extending it to that unknown race which occupied Western Europe before the arrival of the Kelts; it can never be too often repeated that language and race are not convertible, and since "Iberian" has now acquired an ethnological sense it should be carefully shunned by the philologist. The Iberians of ancient Spain probably spoke languages allied to the dialects of

[1] "La Langue ibérienne et la Langue basque," by W. Van Eys, in the "Revue de Linguistique," vii. 1 (1874); "La Question ibérienne," by J. Vinson, in the "Mémoires du Congrès scientifique de France," ii. p. 357 (1874).

[2] The earlier name of the city, Ilurcis, has a very Basque ring.

the Eskuara, but we have little proof of it, and still less proof that all the tribes called Iberian by classical writers shared the heritage of a common speech.

The analogy of some of the Basque compounds to those of the polysynthetic languages of America has just been alluded to; but whereas the principle upon which these compounds are formed appears only casually in Basque, it is the distinguishing feature of the American tongues. Polysynthesism or incapsulation may be defined as the fusion of the several parts of a sentence into a single word, the single words composing it being reduced to their simplest elements. It is, in fact, the undeveloped sentence of primitive speech, out of which the various forms of grammar and the manifold words of the lexicon were ultimately to arise, and it bears record to the earliest strivings of language which have been forgotten elsewhere. The polysynthetic languages of America, in short, preserve the beginnings of grammar, just as the Bushman dialects have preserved the beginnings of phonetic utterance.

We will follow Steinthal[1] in selecting the barbarous Eskimaux of Greenland and the cultivated Aztec of Mexico as the two extreme types of American polysynthetic speech. The differences between them are as great as the differences between Turkish and Kafir; their sole resemblance to one another lies in their common structure. The Eskimaux, like the natives of America generally, knows little of abstracts, but he has an infinity of terminations for expressing all the details of an action and the

[1] "Charakteristik der hauptsächlichsten Typen des Sprachbaues," pp. 202, *sqq.* (1860).

individual objects that meet his gaze. Thus the affix *-fia* denotes the "place" or "time" of doing a thing, *-khshuaq*, "largeness," *-nguaq*, "smallness," *-inaq*, "merely," *-tsiak*, "somewhat," *-liak*, "made," *-siak*, "possessed," *-pait*, "several," and there are other terminations to express what is hateful, suffering, useless, poor, beautiful, pleasant, monstrous, numerous, new, old, divided, near, single. So, too, there are verbal forms signifying to intend, to obtain, gradually, futurity, present, past, no more, to have given up, to seek, to go or come for, to hurry, to wish, to be willing, to be able, to be capable, to assist, to be easily able, to be better able, to be always able, to be no more able, further, much, actively, badly, well, better, merely, thoroughly, fully, too much, singly, continually, repeatedly, nearly, quite, conjecturally, probably, expressly, &c. But practically there is no difference between the noun and the verb; both form but parts of a sentence which is here the word, and hence the same word contains at once subject, verb, and object. Thus *sialuk* is "rain," but *sialugsiokhpok*, "he is outside in the rain," *Kakortok* is the name of a place, but *Kakortuliakhpok*, "he goes to Kakortok." Objects are regarded as either the possession of another or as suffering something from another, or, again, as active and as possessors. If the object is possessed it requires the possessive affix, if a patient the objective affix. The agent and the possessor take the subjective affix. The possessive affixes are themselves of a twofold kind, since though the object possessed must always be the same as regards its possessor, it may be either active or passive as regards another object or another action. Thus in the sentence:

"the whale's tail touched the boat's stern," "tail" and "stern" are equally possessed, but whereas "tail" is active as regards "stern," "stern" is passive. Hence the Greenlander would say: *akhfekhup sarpiata umiap suyua agtorpā*, where the final *-p* denotes that *akhfekhup*, "the whale," is a subject, *-ata* that his "tail" is also a subject like *umia-p*, "the boat," while the *a* of *suyua*, "stern," is a neutral possessive, and the *ā* of *agtorpā* the objective suffix. Similarly the Latin distinction between *ejus* and *suus* is observed in Greenlandish. Naturally, conjunctions and subordinate sentences are unknown; instead of saying: "I saw that a boat came to you," the Greenlander would say: *Kayak ishigākhà ornik-ātit*, "a boat see-I-it coming-it-to-thee." As Steinthal remarks, it seems a waste of time to the Greenlander to distinguish the tenses of the verb. In the rudimentary sentence the element of time is unknown.

It will be noticed, however, that the Greenlander has learnt to break up many at least of his sentences into words. If we go further south, among the North American Indians, we shall find a closer adherence to the original form of speech. In Cheroki, for instance, *nad-hol-i-nin* means "bring us the boat," from *naten*, "to bring," *amokhol*, "boat," and *nin*, "us;" in Algonkin *amanganakh-kiminkhi* is "broad-leaved oaks," from *amangi*, "great," *nakhk*, "the hand," *kim* affix denoting shell-fruit, and *akhpansi*, "trunk," though even these compounds are surpassed by the Greenlandish *aulisariartorasuarpok*, "he hastened to go fishing," from *aulisar*, "to fish," *peartor*, "to be engaged in something," and *pinnesuarpok*, "he hastens."

In Eskimaux and North American Indian, the pronouns are affixed, *kipwuttamu-akūm-ayū* in Cree, for example, signifying "he is smothered in the snow," where *ayū* is the pronoun, *akūm* the noun. The contrary is the case in Mexican. Here the pronouns are all prefixed. Thus *ne-o-ni-k-tsīuh* is "I have done it" (literally "I-have-I-it-done"), *ni-sotsi-tcmoa*, "I look for flowers," *ni-mits-tsikāwakā-tlasòtla*, "I-thee-much-love." But like Greenlandish, Mexican has broken through the rigid rules of polysynthetic structure. While in the sentence *ni-sotsi-temoa* it "incapsulates" the noun *sotsi*, it can also substitute the objective pronoun for it, and use the noun as an independent word. Thus *ni-k-miktia sē-tōtolin*, "I-it-kill a hen," differs but little from a Basque sentence, except that the Mexican attaches the noun somewhat awkwardly at the end as a kind of afterthought, conscious of its departure from the normal form of speech. But it has gone even further than this. It can individualize a substantive, treat it, that is to say, as an independent and separate word, by affixing the termination *-tl*. Thus "I roast the flesh on the fire" would be *ni-k-tle-watsa in nakatl* ("I-it-fire-roast the flesh"), "the songs are sought like flowers," *sotsi-tēmo-lo in twīkatl*, where *lo* is the passive suffix. Reduplication and vowel-change play a considerable part in Aztec grammar, and in the adaptation of vowel-change to express a meaning which lies at the root of all inflectional languages we may see how the different classes of speech tend to overlap one another. *Ni-tla-saka*, for instance, signifies "I bring something along," *ni-tla-sāsaka*, "I bring something along vehemently," *ni-tla-sàsaka*, "I

bring something along vehemently from many quarters;" so, again, *kotōna* is "to cut," *kōkotōna*, "to cut into many pieces," *kòkotōna*, "to cut many things." Reduplication is largely used in forming the plural, though the affixes *-mē* and *-tin* are now commonly employed for the purpose. In fact, modern Aztec has changed a good deal during the last three centuries in consequence of the degradation of its speakers and their mixture with the whites. We must not forget that it was once a literary language, and that the Aztec civilization which was destroyed by the Spaniards and Christianity was, in spite of its unlikeness to the civilizations of Europe, of no mean order. The Mexicans, indeed, had not attained the developed system of writing of their Maya neighbours in the South, who used characters that were partly hieroglyphic, partly syllabic, and partly alphabetic; but the numerous MSS. written in Aztec hieroglyphics that existed at the time of the Spanish conquest prove that the traditions of native literary culture were not without foundation. Few of these escaped the ravages of Spanish bigotry, and none of those we possess seem to contain any specimens of the poetry for which the ancient Aztecs were famous.[1] Of the Old Maya literature only three works remain, the "Second Mexican Manuscript" in the National Library at Paris, the "Dresden Codex," and the "Manuscript Troans."

Chinese is naturally the first example of an isolating language that occurs to the mind. Chinese civilization and literature reached back beyond B.C. 2000, how much beyond we shall probably never know. It arose in the

[1] See Bancroft: "Native Races of the Pacific," ii. ch. xvii.

alluvial plain of the Hoang-ho or Yellow River, perhaps at the same time that an independent civilization was arising in the alluvial plain of the Tigris and Euphrates. Since those early days the language has changed greatly; phonetic decay has been busy with the dictionary, tones have been introduced to express relations of grammar, position and syntax have been replaced by "empty words," which have come to be mere grammatical symbols like our *to* or *of*, and the whole speech has grown old and weather-beaten. It is the Mandarin dialect which chiefly shows these marks of ruin; here the initial and final consonants have been dropped one by one until every word save one[1] ends with the same monotonous nasal. Elsewhere, however, the dialects have displayed a more strenuous resistance. In the north, indeed, the primitive seat of Chinese power, no less than three final consonants have been lost, but along the southern bank of the Yang-tsi-kiang, and through Chekiang to Fuh-kien, Dr. Edkins tells us, the old initials are still preserved. As has been noticed in a former chapter, it is partly by means of these dialects, partly by the help of the ancient rhymed poetry, partly by a thorough investigation of the written characters that Dr. Edkins and Prof. de Rosny have been enabled to restore the original pronunciation of Chinese words, and to trace the gradual decay of this pronunciation first in the long ages that preceded Confucius (B.C. 551-477), and then in the centuries that have followed. As sounds disappeared, and words formerly distinct came to assume the same form, a new device was needed for marking the difference

[1] *Eul*, "two" and "ear."

between them. This was found in the multiplication of the tones, which now number eight, though only four are in common use, the tones playing a similar constructive part in Chinese to that played by analogy in our own family of speech. It takes about 1200 years, says Dr. Edkins, to produce a new tone. But from the first the words of Chinese are monosyllabic; there may have been, and probably was, a time when polysyllables existed, as they still do in Tibetan,[1] but all record of it has perished. In spite, therefore, of the tones, the same word has often a great variety of meanings, as in Old Egyptian; thus *yu* is "me;" "agree," "rejoice," "measure," "stupid," "black ox," and *lu*, "turn aside," "forge," "vehicle," "precious stone," "dew," "way."

"In Chinese," says Prof. Steinthal,[2] "the smallest real whole is a sentence, or at least a sentence-relation, or perhaps a group of roots, which, even if it is not yet a sentence, or a sentence-relation, is still something more or other than a word. Thus while other languages can form words and sentences, Chinese can form only sentences, and its grammar really resolves itself into syntax." In fact, when once we know the prescribed order of words in a Chinese sentence, we are virtually masters of its grammar. The subject always comes first, the direct object follows the word expressing action, and the genitive, like the attribute, precedes the noun that governs it. The defining word, in short, stands before the word

[1] See Böhtlingk: "Sprache der Jakuten," p. xvii. *note* 46, who observes that several Tibetan roots that are now monosyllabic can be proved to have once been polysyllabic.

[2] "Charakteristik," p. 113.

it defines, the completing word after the word it completes. Nowhere is the order of the Chinese sentence better illustrated than in the ideographic use of the Chinese characters in Japanese, which are read as though they were Japanese. Thus, in order to express the words, "but I shall not see him to-day," in this mode of writing, the characters would follow one another in the order required in Chinese, "but not shall I see to-day him," but they would be read by the Japanese in exactly the reverse order, "him shall I see to-day not but."[1] It must not be assumed, however, that the order of the sentence follows one hard and fast rule. We have just seen that while the genitive and attribute precede the noun, the object follows the verb, to which it might be supposed to stand in much the same relation as the attribute to the noun. Sentences which express the purpose, again, follow the principal clause, as do also "objective substantival sentences" in most cases, although adjectival, temporal, causal, and conditional ones precede it. Though each word has its own fixed place, that place depends upon logic and rhythm, and not upon a general law which forces every part of the sentence into the same mould. Literary development has doubtless had much to do with this result, and inversions of the established order which were first introduced by the requirements of rhetoric have now made their way into the current speech. In sharp contrast to this comparative flexibility of Chinese stands the stereotyped arrangement of the Burmese or

[1] The Chinese ideographs are called *koyé* or *won* (Chinese *yin*), the Japanese reading of them, *yomi* or *kun* or *tókŭ*. See Hoffmann: "Japanese Grammar," 1st edition, pp. 32, 46.

the Siamese sentence. Here no distinction is made between the different grammatical relations of a sentence, or the different kinds of sentences; in Siamese or T'hai every word which defines another must follow it, in Burman it must equally precede. No account is taken of the fact that the nature of the definition cannot always be alike. Hence the inability of these languages to denote the various turns of expression, the various forms of sentence and syntax, that we find in Chinese: hence, too, the greater need of auxiliary or "empty" words to avoid the uncertainty occasioned by the constant application of one unbending law of position.

Not that Chinese, especially modern Chinese, dispenses with those symbolic auxiliaries which Prof. Earle has christened "presentives;" just as the Old English flectional genitive in *-s* is making way for the analytical genitive with "of," so the Old Chinese genitive of position may now be replaced by the periphrastic genitive with *ti* or "of." *Ti*, originally meaning "place," has now come to be merely a relative pronoun, marking the genitive, the adjective and participle, the possessive pronoun, and even the adverb as well. So, too, the plural, the dative, the instrumental, the locative, and the like, may all be denoted by particles instead of by position only. These particles are merely worn-out substantives, *twi*, for instance, the symbol of the dative, having once meant "opposition," *tsung*, the symbol of the locative, "the middle." Similarly person and time may be expressed by pronouns, adverbs, and auxiliary verbs, not by syntax merely. In fact, the same tendency towards increasing clearness of expression which has shown itself in the

modern languages of Europe, has also shown itself in Chinese. Less has been left to suggestion; thought has been able to find a fuller and distincter clothing for itself, and requires less to be understood by another. Science needs to be precise, and it is in the direction of science, that is to say, of accurate and formulated knowledge, that all civilization must tend. Language is ever becoming a more and more perfect instrument of thought; the vagueness and imperfection that characterized the first attempts at speech, the first hints of the meaning to be conveyed, have gradually been replaced by clearness and analysis. It is true that language must always remain more or less symbolic and suggestive; it can neither represent things as they are, nor embody exactly the thought that conceives them; to the last we must understand in speech more than we actually hear. As Chaignet has said,[1] "Les rapports nécessaires ne s'expriment presque jamais; les plus grossiers d'entre les hommes sont encore des sages; ils s'entendent à demi-mot; ils parlent par sous-entendus;" and Prof. Bréal has emphasized the fact under the name of "the latent ideas of language," calling attention to the manifold relations and senses in which a single word like *company* is understood according to the connection in which it is found.

Words, and the ideas which lie behind them, define and explain each other. It is by comparison and limitation that science marches forward: it is by the same means that the dictionary is enlarged and made clear. Nowhere is this fact better known than in the isolating

[1] "La Philosophie de la Science du Langage étudiée dans la Formation des Mots" (1875), p. 83.

languages of the far East, where each word taken by itself may belong to any one of the parts of speech. Thus in Siamese *luk mei*, "son + tree," is "fruit," *mä nā*, "mother + water," is "stream," *chai plaw*, "heart + empty," is "extravagance," while in Burman *kay khyan*, "rescue + thing," is "deliverance," *lū gale*, "horse + young," is "boy," *ran prĭ*, "strife + make," is "to contend."[1] But it is in Chinese that the principle has been carried out to its fullest extent. Out of the 44,500 words in the imperial dictionary of Kang-hi, 1097 begin with (or are formed upon) *sin*, "the heart." So, too, *thyan*, "the sky," in the general sense of "time," serves to define a whole class of words. *Chun thyan* is "spring," *h'ya thyan*, "summer," *chyeu thyan*, "autumn," *tung thyan*, "winter;" *tso thyan* is yesterday, *kin thyan*, "to-day. *Tsi* by itself is at once "finger" and "pointing," but the combination with it of *thau*, "the head," renders its meaning at once unquestionable. No doubt can arise as to the signification of *tau* and *lu*, which both mean "road" when they are joined together, any more than in the case of such combinations or compounds as *khing sung*, "light-heavy," *i.e.* "weight," or *fu-mu*, "father-mother," *i.e.* "parents." Sometimes not only two, but six or seven words may be united, and the whole combination used as one word with a single meaning of its own; thus in Kiang-nan a man may say: *phyau-tu-chi-chwen*, "pleasure + play + eating + drinking," with

[1] So in Malagassy *reni-landy*, "mother + silk," means the silk-worm," *reni-tantely*, "mother + honey," "the bee." Van der Tuuk: "Outlines of a Grammar of the Malagassy Language," p. 7.

the common signification of the pleasures of life.[1] Usage, however, determines the order and employment of these compound expressions; thus the phrase just quoted would run in the northern provinces *chi-li'o-phyau-tu*, and it would often be incorrect to use the determinative of a certain class of words with a word which might seem naturally to belong to the same class. But it must be remembered that it is as impossible for an isolating language to think of the single word apart from the sentence or context as it is for polysynthetic language to do so, and Steinthal[2] remarks with justice that "the Chinaman never uses the root [or rather word] 好 *hâu* alone, but always in conjunction with an object."

Accentual rhythm is further employed to help out the meaning of a sentence. Where one word is defined by another, or accompanied by an "empty" word, the accent rests upon it; where the two words are synonyms or mutually defining, the accent rests upon the second, though in some dialects on the first. Where four or five words are joined together, a secondary accent springs up by the side of the principal one, resting on the second word should the principal accent fall on the fourth or fifth.

Chinese literature is at once extensive and ancient, in spite of the destruction of it ascribed to the Emperor Chi-whang-ti (B.C. 221), a destruction, however, that could in no case have been complete, and is very possibly as legendary as Omar's destruction of the Alexandrine Library.[3] At all events, in the Shu-king, the classical his-

[1] Edkins: "Grammar of the Mandarin Dialect," p. 111.

[2] "Charakteristik," p. 122.

[3] Only works on medicine, divination, and agriculture are said to

tory of China, we have a work of Confucius himself, and the nine other Chinese classics, consisting of the five classics and four books, claim an equal or greater antiquity.[1] In the Shi-king upwards of 300 odes have been preserved, many of them in rhyme, a Chinese invention which was rediscovered in Europe at a far later date, according to Nigra, by the Kelts. Besides the religious, or rather moral works, of Confucius, Mencius, and Lao-tse, Chinese literature comprised books upon almost every conceivable subject, including the famous "Tai-tsing-ye-tung-tse," an encyclopædia of the arts and sciences in 200 volumes. It was published at the instance of the Emperor Kien-lung (A.D. 1735-95), and is but one example out of many of the encyclopædic labours of the Chinese *savans*. China has long since entered upon the period of its decrepitude; the perfection to which the examination-system has been carried has fossilized its civilization and dried up the springs of the national life; and if the Chinese people are ever to expand and progress again, it will rather be in the new worlds of America and Australia than in the effete Celestial Empire itself. But we must not forget that the beginnings of Chinese civilization are lost in a fabulous antiquity; when our own forefathers were sunk in abject barbarism or struggling through the gloom of the Dark Ages, China was building up the fabric of an isolated culture, and inventing writing and printing, silk

have been exempted from the edict of destruction. A copy of the Shu-king, or "Book of History," was, however, discovered subsequently in pulling down an old house.

[1] The earliest of these is the "Book of Changes," a sort of mystical geometry, compiled in prison by Wăn-Whang about 1150 B.C.

paper and the compass. In China we see a time-worn and decaying people, and since the language of a people is but the outward expression of its spirit, we must equally see in the Chinese language a time-worn and decaying form of speech.

CHAPTER IX.

COMPARATIVE MYTHOLOGY AND THE SCIENCE OF RELIGION.

"For no thought of man made Gods to love or honour
Ere the song within the silent soul began,
Nor might earth in dream or deed take heaven upon her
Till the word was clothed with speech by lips of man."

SWINBURNE.

"Every legend fair
Which the supreme Caucasian mind
Carved out of Nature for itself."

TENNYSON.

PLATO, in his "Phædrus," tells us how Sokrates, as he walked along the banks of the Ilisus, was questioned by Phædrus regarding the local legend of Boreas and Orithyia. And the answer which he puts into the mouth of his master is one full of interest and suggestion. "The wise are doubtful," says Sokrates, "and if, like them, I also doubted, there would be nothing very strange in that. I might have a rational explanation that Orithyia was playing with Pharmacia, when a northern gust carried her over the neighbouring rocks; and this being the manner of her death, she was said to have been carried away by Boreas. There is a discrepancy, however, about the locality, as according to another version of the story she was taken from the Areopagus, and not from this

place. Now I quite acknowledge that these explanations are very nice, but he is not to be envied who has to give them; much labour and ingenuity will be required of him; and when he has once begun, he must go on and rehabilitate centaurs and chimæras dire. Gorgons and winged steeds flow in apace, and numberless other inconceivable and impossible monstrosities and marvels of nature. And if he is sceptical about them, and would fain reduce them all to the rules of probability, this sort of crude philosophy will take up all his time."[1] The fantastic world of mythology confronted the cultivated Greek of the age of Sokrates and Plato in a way which it is hard for us to realize, and there were few equally bold enough to confess their inability to explain it. For it much needed explanation; the popular mythology shocked the morality of the Greeks of the Sophistic and philosophic age, as much as it offended their reason and experience. And yet this mythology formed the background of their art and their religion; it had been made familiar to them in their childhood, and every spot their eyes rested on recalled some ancient myth. It was not so very long before the time of Sokrates that the old mythology had exercised a potent influence upon the politics of the day; the five Spartan arbitrators had adjudged Salamis to Athens, when Solon had wrested it from the hands of the Megarians, on the ground that it was to Athens that the sons of Ajax had once migrated. Unless the Greek was prepared, like Xenophanes, to denounce Homer and Hesiod as the inventors of his mythology and the "lies" it told about God, or to banish the

[1] "Phædrus," p. 229. Jowett's translation.

poets from the ideal state, like Plato in his Republic, and forbid them to repeat their legends in the hearing of the young, he was sorely tried to harmonize the belief of his manhood with the myths that had been bequeathed to him by the childhood of his race.

Theagenes of Rhegium (B.C. 520) is said to have first attacked the problem, and like the Jewish and Christian commentators of a later time to have found the key in allegory. The tales of Homer were but veiled forms beneath which the truth lay hidden to be revealed by the qualified interpreter. The myths had ceased to be fairy-tales belonging to another world than this, and constituting no rule of action; their absolute incompatibility, when literally understood, with the morality and science of a newer age, was brought out in full relief, and the doctrine laid down that "the letter killeth, but the spirit giveth life." What, however, this spirit was, what the allegory was intended to convey, admitted of dispute, and led to the formation of different schools of interpretation. There were those who saw in them symbols of scientific phænomena, and regarded the old poets as wonderful physicists acquainted with all the facts and phænomena of nature which a later age had to rediscover. Thus we find Metrodorus resolving Agamemnon and the other heroes of the Trojan Epic into the elements and physical agencies, the gods themselves not escaping the process of transmutation. There were others, again, like the Neo-Platonists, for whom the myths were moral symbols, and with them Helen became the soul of man, around which must fight the powers of light and darkness, the reason and the

passions, the strivings after good, and the temptation to evil. Plato, we have seen, hesitated in his opinion on the matter. At one time he looks upon the myths as the mischievous products of the poets, between whom and the philosophers there must be perpetual war; at another time he shrinks from pronouncing sentence against them, and confesses that they embody feeling and religion. The more practical mind of Aristotle accepted the facts, and made no attempt to explain them away. Secure in his own conception of the impersonal reason, of thought thinking upon itself, he was content to leave to the multitude their myths partly as yielding an easy and popular explanation of the difficulties of life, partly as serving to satisfy their spiritual needs and prevent them from becoming dangerous to the State. The myths themselves, he holds, are the "waifs and strays" which have come down to us from those earlier cycles of existence through which the universe has been eternally passing; though how they survived the cataclysms with which each cycle ended we are not told.

Aristotle was the last of the philosophers who saw in the old myths something more than the deliberate fabrications of an interested class of persons. Such belief as still remained in the traditional mythology was rapidly passing away: the educated classes had found a religious resting-place in the atheism of Epikurus, while the masses were eagerly accepting the strange and wonder-working superstitions which were pouring in from the East. On all sides it was agreed that, if the gods of Hellas existed at all, they took no part in the affairs of this world. Their holy serenity could never be ruffled by the passions

and the miseries of human life. With them, therefore, the myths could have nothing to do, and the contrary belief was but one of those worn-out superstitions which could not survive the extinction of Greek freedom. To Euhemerus was due the great discovery that the gods and demi-gods of the ancient mythology were but deified men; men, too, more immoral and dissolute than even the polished coteries of Alexandria or Pergamus. Euhemerus, it would seem, threw the statement of his doctrine into the form of a romance. In the words of Diodorus, it began by asserting that "the ancients have delivered to their posterity two different notions of the gods; one of those that were eternal and immortal, as the sun, moon, stars, and other parts of the universe; while others were terrestrial gods that were so made because they were benefactors to mankind, as Herakles, Dionysius, and others." Euhemerus professed to have derived his information from inscriptions in Egyptian hieroglyphics on a golden pillar in an ancient temple of Zeus at Panara, a town in the island of Pankhæa, off the coast of Arabia Felix. Above Panara rose a mountain where Uranus had once dwelt, and the inhabitants were named Triphyllians, being three Kretan tribes who had settled in the country in the time of Zeus, but were afterwards expelled by Ammon. The inscriptions were written by Hermes or Thoth, and recorded the lives and adventures of Uranus, Zeus, Artemis, and Apollo.

Such was the framework into which the rationalistic explanation of mythology, since known as Euhemerism, was fitted by its author. It suited the spirit of the time, and was transplanted to Rome by Ennius, the apostle of

Epicurean scepticism, where it found a ready welcome among an unimaginative and rationalizing people. Histories were now written in which the old myths, stripped of all that was marvellous in them, and therefore of their real life and essence, figured side by side with the facts of contemporaneous history. The primitive condition of the human mind, the character of the age in which the myths arose, was grotesquely misconceived, and in destroying the halo of divinity which encircled its ancient myths, paganism destroyed itself. The work begun by Euhemerus was completed by the irreverent satire of Lucian, the Voltaire of the Roman Empire.

But a new power was growing up in their midst, of which the wits and sceptics knew and thought but little. Christianity was slowly attracting to itself all those who still felt that they needed a religious creed. And Christianity, not yet freed from the influences of its Jewish birthplace, was prone to identify the deities of heathenism with the demons of Pharisaic philosophy and to turn the mythology of ancient Greece into a record of demoniac activity. The Christian was quite ready to accept the element of the miraculous contained in a myth, but he referred it to the agency of Satan. In the hands of the Christian writers, therefore, Greek mythology lost all its beauty and attractiveness; reminiscences of it still survived to mingle with the legends—Jewish, Norse, or Arabic—which satisfied the literary cravings of the Middle Ages, but otherwise it was lost and forgotten, or else looked upon with dread and abhorrence. It remained for the Renaissance, for the new birth of Europe from the slumber of the

Dark Ages, to revivify the old myths of Greece and with them the paganism of which they had once formed part.

But like most revivals, the neo-paganism of the Italian Renaissance was forced and artificial. The spell exercised by the Greek myths was due to their connection with Greek literature and art; it was not founded on belief and education. Between the society of Athens in the days of Sokrates and the society of Italy in the age of Leo X., there was a great gulf fixed, and the scholars and humanists who believed they had crossed it merely deceived themselves. The old Greek, even though he were a follower of Epikurus, started with the assumption of the truth of his mythology; the traditions of childhood, the social atmosphere around him, made this a necessity. The humanist, on the other hand, had to start with the assumption of its falsity; and the same impulse, the same contempt for the opinions of the uninstructed, which had made Euhemerus a rationalist, made the humanist persuade himself that he was a believing pagan. His attempt to revive a dead creed was necessarily a failure; all that he could do was to restore to Greek mythology its beauty and grace, to excite once more the old questions as to its origin and its nature.

The theories of modern thinkers, however much they may agree with those of the ancient Greeks in method or conclusions, differ from them wholly in one essential point. The modern European knows nothing of that feeling of reverence with which the myths were once approached; they are for him unconnected with the affairs of everyday life. The investigation of their origin and significance is a purely literary or scientific question;

it has no practical bearing or importance whatsoever. It was entered upon, too, when Europe was still under the dominion of two ruling ideas. One was the lingering belief that the gods of the heathen were devils in whose honour and interests the myths had been composed; the other was the new idea so fittingly expressed by the Baconian term "invention," which regarded the whole universe as a piece of clockwork whose secrets were to be solved by discovering how it had been artificially put together. On no side was there any doubt that the old Greek myths were cunningly devised fables; the only dispute was as to the purpose for which they had been devised, and who had devised them. The believers in the current theology, the students of the classical literature, the disciples of the rising school of inductive science, all alike saw in them artificial products and deliberate inventions. The philosophers resorted to the old allegorical method of interpretation, the theologians preferred the method of Euhemerus, or else convinced themselves that the mythology of the ancient world was but an echo and distorted form of Hebrew tradition.

The allegorical school of interpreters is best illustrated by Lord Bacon in his treatise "De Sapientia Veterum." Its popularity is evidenced by the editions it rapidly went through, and by its translation into English and Italian. It was imagined to have solved the problem of mythology, to have penetrated into the inmost meaning of the myths. They were the allegories of the priests of early time who veiled their deep knowledge of the mysteries of nature in parables and similitudes which the uninitiated multitude interpreted as literal facts. Para-

bles were employed "as a method of teaching, whereby inventions that are new and abstruse and remote from vulgar opinions may find an easier passage to the understanding." "For," continues Bacon, "as hieroglyphics came before letters, so parables came before arguments." The Egyptian priesthood was credited with the profoundest wisdom, and in the Egyptian hieroglyphics was found a clear proof of the doctrine of the allegorizers. As the figure of a vulture signified "maternity,"[1] so Bacon makes Cassandra a symbol of plainness of speech, and converts the Cyclopes into "ministers of terror." In Pan he sees nature itself, the shaggy hairs of the god being "the rays which all bodies emit," his biform body denoting "the bodies of the upper and the lower world," his goat's feet, "the motion upwards of terrestrial bodies towards the regions of air and sky," his pipe of seven reeds, "that harmony and concent of things, that concord mixed with discord, which results from the motions of the seven planets." Cupid, again, is the primæval atom, "the appetite or instinct of primal matter; or to speak more plainly, the natural motion of the atom." His "attribute of archery" indicates "the action of the virtue of the atom at a distance," while his everlasting youth means that "the primary seeds of things or atoms are minute and remain in perpetual infancy." Bacon, in his Essay, unites the two schools of allegorizers, both those who held that the myths had a moral meaning, and those who interpreted them of the phænomena of nature. It seems strange that so keen an intellect should never have asked itself how it could support and verify

[1] Horapollo, i. 20.

the interpretation it put forward. Upon Bacon's principles, the same myth could be explained in a hundred different ways according to the fancy of the hierophant, and his famous treatise remains a monument not of ingenuity merely, but also of the ease with which a great thinker will overlook the most obvious arguments against the prevalent ideas of his own time.

The Baconian school of allegorizers was followed by a revival of Euhemerism. The rationalistic explanation of mythology was peculiarly acceptable to an age which had not as yet formulated the canons of documentary criticism, but was deeply corroded by a prosaic scepticism. The mechanical theory of the universe was in high favour, the conception of development was still to be struck out, and the past ages of the world were judged of by the standard of the present. Once more, therefore, an attempt was made to extract a pseudo-history from the Greek myths by stripping them of the supernatural and ascribing it to the inventiveness of an interested priesthood. The pages of Lemprière's "Classical Dictionary" give a good idea of the success achieved by the school. Here we may read how Circe was "a daughter of Sol and Perseis, celebrated for her knowledge of magic and venomous herbs," how Inachus was "a son of Oceanus and Tethys, father of Io, and also of Phoroneus and Ægialeus," who "founded the kingdom of Argos and was succeeded by Phoroneus B.C. 1807, and gave his name to a river of Argos, of which he became the tutelar deity after reigning sixty years," and how Erichthonius, "the fourth king of Argos, sprung from the seed of Vulcan," after being placed in a basket by Minerva,

"reigned fifty years, and died B.C. 1437." The Abbé Banier, the leading authority in France on the subject of ancient mythology during the earlier part of the last century, went even further. Thus he tells us that he will "make it appear that Minotaur with Pasiphaë, and the rest of that fable, contain nothing but an intrigue of the Queen of Crete with a captain named Taurus;" and stuff of this kind was translated into English and served up before the English public in six large volumes, under the title of "The Mythology and Fables of the Ancients, explained from History," in 1737.

The myths, however, fared no better at the hands of the theologians. Bochart saw in Saturn the Biblical Noah, and in his three sons Jupiter, Neptune, and Pluto, the three sons of Noah—Ham, Japhet, and Shem.[1] G. J. Voss, on the other hand, identified Saturn with Adam, with an equal show of reason, while Prometheus became Noah, and Typhon, Og, King of Bashan.[2] Towards the end of the last century Bryant's learned book, entitled "A New System, or an Analysis of Ancient Mythology" (1774-6), made a considerable stir in this country, his object being to show that the myths of antiquity were but distorted echoes of "the primitive tradition" recorded in the Old Testament, and that idolatry was but a perversion of the original revelation vouchsafed to Adam and his descendants. This theological explanation of mythology is even now not quite extinct. Apart from second-rate theological literature, we find Mr. Glad-

[1] "Geographia Sacra," i. (1646).

[2] "De Theologiâ gentili et Physiologia christiana, sive de Origine et Progressu Idolatriæ," pp. 71, 73, 97 (1668).

stone, in his "Studies on Homer," endorsing the same views, and resolving Zeus, Apollo, and Athena into the three Persons of the Trinity. Even the arbitrary explanations of the allegorizing school have more plausibility than those of the theological interpreters; at any rate they need fewer assumptions, and do not come into conflict with the ascertained facts of history. The assumption of a primæval revelation, and of the preservation of its shattered relics in the religious and mythological beliefs of the heathen world, is a pure creation of the fancy; while the mixture of Aryan and Semitic involved in the theological theory is contrary to all that has been taught us by modern science and research.

It was Grote who made the great step forward in the explanation of Greek mythology. He first pointed out clearly the essential character of a myth, and the distance which separates it from history. To mix the two together is to destroy both. The attempt to find history and philosophy in mythology is to rob mythology of its innermost spirit and kernel; the attempt to link history with myth is to turn it into fable. Myth and history belong to two different phases of the human mind; what history is to the grown man and a cultivated age, that myth is to the child and the childlike society of the early world. There is a gulf between the two which cannot be bridged over; deal with a myth as we may, it still remains a myth, it can never become history. And a myth must be dealt with as a whole; we must not take a part of it only, and according to our own arbitrary judgment determine what we shall accept and what we shall reject. Those who would strip the myth of the marvellous and

supernatural, take from it, not merely its beauty and its poetry, but its very life and essence as well. The mythical age and the historical age stand widely apart; they demand a different mode of treatment, a different standard of criticism, a different attitude of mind.

Here Grote was content to leave the problem, without making an attempt to discover how the mythology grew up, or what was the origin of the mythical age. Some myths, like the story of Phœbus or Hyperion, were plainly symbolic, scarcely concealing beneath their language of metaphor the phænomena of nature they were intended to express; other myths, Grote allowed, might be based on historical tradition, though without the ordinary aids of the historian it was impossible to prove this; but speaking generally, the origin of mythology must be left unexplained, the key to its interpretation had been lost, and the endeavours made to find it had all ended in disappointment and delusion.

At the very moment, however, that Grote was thus writing, the lost key was being found, the solution of the problem of which he despaired was being discovered. The same scientific method of comparison to which the secrets of nature have been made to yield, has been successfully applied to the old riddle of mythology. The world of mythology is the creation of language—of language that has ceased to be real and living, and has become dead and forgotten. A myth, as a general rule, is but a "faded metaphor" and misinterpreted expression. The living signification it once possessed has perished out of it, and a new and false signification has been put into it. Language can at best express but im-

perfectly the ideas we wish to convey. It is by suggestion and simile, rather than by clear and definite statement, that we understand one another's meaning. Analogy is the chief instrument by means of which the vocabulary is extended; spiritual, moral, philosophical ideas must all be represented by words denoting the objects of sense. At first but little distinction is drawn between the primary sensuous signification of the word and its metaphorical application; but gradually the original sense fades out of view, the meaning of the word becomes more scientifically precise, and it passes from the realm of poetry to that of sober prose. The younger a language, the more primitive a society, the more numerous will necessarily be its metaphors and metaphorical expressions, the less scientific its phraseology. And these metaphors are the seeds out of which mythology has grown. When Tennyson writes:—

> "Sad Hesper o'er the buried sun,
> And ready, thou, to die with him,"[1]

there is no danger of our understanding the words otherwise than as a poetical metaphor, but in the early days of humanity, before the birth of science or the growth of a scientific language, there was not only a danger but an inevitable necessity of such a misunderstanding taking place. The sensuous imagery in which a childlike society had endeavoured to shadow forth its ideas and its knowledge became a snare and a false clue to the generations that followed. The ideas and knowledge of mankind change with the centuries, and little

[1] "In Memoriam," cxx.

by little the true meaning of the old words and phrases is forgotten, new senses are put into them, new conceptions attached, and false interpretations imagined. We are all convinced that whatever exists must have a reason for its existence. Words without significance are but the echoes of a gibberish that fall upon the inattentive ear, and as quickly disappear. Such empty sounds cannot fasten themselves upon the memory, and there is no reason why they should. We assign to them a meaning which they seem to us most plausibly to bear, slightly changing their pronunciation if need be to suit the sense required. A housekeeper in one of the large mansions of the north used to point out a Canaletto to visitors with the remark that it was "a candle-light picture, so called because it could not be seen to best advantage during the day;" and what this good housekeeper did on a small scale, mankind has always been doing on a large scale. The heritage of names and phrases which has descended to us invested with all the reverence of antiquity must, we feel, be preserved; yet all natural sense and meaning has vanished out of them, and the only sense we can attach to them is one utterly strange and unreal, which needs a commentator to account for it. One part only of the language we receive from our fathers expresses, however imperfectly, our present knowledge of the world about us; the other part is the enshrinement of dead and forgotten knowledge, a phantom-speech which corresponds with no reality of things. Gorgeous as may be the colours of this fairyland of mythology, the spirit that we breathe into them is the spirit of our dreams. It is true that with the increase of our know-

ledge, the limits of this fairyland grow more and more contracted, and to find it in its full extent we must go to the barbarians of the Pacific, or the children and the uneducated of our own country. Nevertheless, so long as language remains strewn with metaphor and poetry, so long as it is not reduced into a jargon of scientific exactness, so long is a certain amount of mythology inevitable even for the most sceptical and prosaic among us. We still personify "nature" in ordinary speech, we still speak of the sun as "rising" and "setting," of the world as "growing old," of "the spirit of an age." Language is the outward expression and embodiment of thought; but once formed it reacts upon that thought and moulds it to what shape it wills.

A myth, then, cannot arise unless the true meaning of a word or phrase has been forgotten and a false meaning or explanation been fastened upon it. Sometimes the false meaning has been the result of a simple blunder; as, for instance, when the official recognition of the Septuagint translation of the Pentateuch, by the seventy members of the Alexandrian Sanhedrim, caused the unknown author of the Epistle of Aristeas to imagine that the translation itself was made by seventy persons.[1] Sometimes, again, it has originated in taking literally what was intended metaphorically, as when the Talmudic writers found in two verses in the Psalms (xxii. 21, cxxxii. 1, &c.)[2] a basis for their curious legend which

[1] Hitzig: "Geschichte des Volkes Israel," p. 341.

[2] "Save me from the lion's mouth: for thou hast heard me from the horns of the unicorns" [wild bulls]; "Lord, remember David, and all his afflictions: how he sware unto the LORD, and vowed unto the mighty One of Jacob," &c.

told how David was once when keeping his sheep carried up to the sky on the back of a monstrous rhinoceros, and, in return for the deliverance vouchsafed him by God through the help of a lion, promised to build a temple whose dimensions should be those of the animal's horn.[1] Sometimes it has resulted from the change of signification undergone by words in the course of centuries. Thus, the "silly sheep" of which Spenser speaks are objects not of compassion but of envy, *silly* being, like its German cousin *selig*, "blessed" or "happy." Sometimes a myth has sprung from the attempt to assign a meaning to an unintelligible word by deriving it from words of similar sound. Such myths are created by those popular etymologies—that *Volksetymologie* as the Germans call it—which play so large a part in local names. A gardener has been known to speak of *ashes-spilt*, by which he meant *asphalt*, a word utterly unintelligible to him. Familiar instances of such myths are the legends of the deer killed by Little John, or of the suicide of Pontius Pilate, which have grown up from the attempts to explain the names of Shotover Hill, really a corruption of *Château Vert*, "The Green House," and of the Swiss mountain Pilatus, originally *Pileatus*, so called from the "cap" of cloud that often rests upon it. The latter legend is a good illustration of the way in which a myth, when once

[1] "Midrash Tillim," fol. 21, col. 2. A similar example may be met with in "Pirkê R. Eliezer," c. 45, where we are told that Moses dug a deep pit in the land of Gad, and confined in it the evil angel Karún, who was allowed to creep out of it and plague the Israelites only when they sinned. The real source of the story is the fact that *Karún*, "anger," is the Arabic form of the Hebrew name Korah.

current, will be believed in against all evidence to the contrary. The small snow lake near the top of the mountain was transformed into a spot worthy of the remorseful death of the Roman proconsul, and natives and visitors, in spite of the testimony of their senses, insisted upon investing it with a fictitious horror. Thus Merian in 1642 describes it as "situated in a secluded spot, deep and fearful, surrounded by dark woods, and enclosed to prevent the approach of man; its colour is black, it is always calm, and its surface is undisturbed by the wind." It is remarkable that a French range of hills in the neighbourhood of Vienne bears the same name as the Swiss mountain, and from the same cause. Vienne, however, was actually the place to which Pilate was banished; and the accidental coincidence is a striking example of the impossibility of our discovering historic truth in a myth, although we may know from other sources that it has accidentally attached itself to a real event. Close to Vienne is a ruin called the "Tour de Mauconseil," from which, it is said, Pilate threw himself in his despair. But the value of the legend may be easily estimated when we learn that the tower is really a *tête-du-pont* built by Philippe de Valois. The eponymous heroes from whom tribes and nations have been supposed to derive their names, owe their existence to the same popular etymologizing, and are as little serviceable to the historian or the ethnologist as the legends of Pilate's death. Thus *Rome* had to be supplied with a founder of the same name; and since the legends hesitated between two pronunciations of the word, *Remus* with an *e*, and the diminutive *Romulus* with an *o*, the conclusion was near

at hand that Romulus and Remus were twin-brothers, to both of whom was due the foundation of the city.

But these four sources of misunderstanding would not by themselves account for all the myths with which the early literature of our race is filled. They must be combined with the inability of language to express the spiritual and the abstract without the help of sensuous imagery. The rich mythology of Greece and Rome, of Scandinavia and Germany, has, in large measure, grown out of the misunderstood words and phrases whereby our primitive forefathers tried to shadow forth their knowledge of nature and themselves. Like the child and the barbarian of to-day, they had not yet awakened to the distinction between object and subject, between the thinker and that whereof he thinks. The nominative of the first personal pronoun is later than the accusative; it was not *ego*, *aham*, that was attached to the first person of the verbal form, but *ma*, *mi*. Hence it was that human action and human passion were ascribed to the forces and phænomena of nature, and conversely the attributes of inanimate objects to animate beings. And so men spoke of the sun coming out of his chamber like a bridegroom, and rejoicing as a giant to run his course; of the dawn mounting up from the sea with rosy fingers, and fleeing from the sun as he pursued her with his burning rays; or of the fire devouring its victim and purifying the hearth of its suppliant. Partly because of this childish confusion between nature and self, partly because all abstract ideas *must* be expressed in the language of metaphor, the seeds of an abundant mythology were sown for future generations to nourish and mature. The sun

became a giant, whose chariot rolled daily out of his palace in the east; the dawn was changed into Daphnê, and her pursuer into Apollo; and the fire was exalted into a mighty god whose adventures were strange and manifold. Expressions which had fully represented the knowledge and conceptions of an earlier period were no longer adequate or applicable; their true meaning, consequently, had come to be forgotten, and a wrong meaning to be read into them; and all that remained was to interpret the new meaning in accordance with the beliefs and prejudices of a later day. Myths, for the most part, embody the fossilized knowledge and ideas of a previous era forgotten and misinterpreted by those that have inherited them.

Just as there is a historic age, so also is there a mythopœic age. When society becomes more organized, when the family passes into the tribe or clan, the fact is reflected in the language of the community and the ideas which shape and control it. The mere animal wonder of the savage makes way for inquiry: "La maraviglia Dell' ignoranza e la figlia e del sapere La madre." And along with this awakened curiosity to understand and interpret the outward world, goes the first striving of the intellectual instinct which takes the form of tales and legends, of hymns to the gods and songs of victory. Language is needed for something better than the mere acquisition of the necessaries of life; the society it has knit together and created works out upon it the fancies of its growing thought, and finds leisure in which to gratify its spiritual and intellectual wants, and to fill its vocabulary with new words and meanings. Language enters upon its epithetic

stage, upon the period when the newly wakened mind and eye seize eagerly upon the analogies and resemblances between things, and when, accordingly, the same attribute is applied to innumerable objects which agree together only in possessing it. The same imitative tendency that furnished language with its first raw material is now busy in developing it, in making it express the changeful ideas and feelings of the human mind. Whatever could be called by a familiar name seemed thereby to be brought within the bounds of comprehension. We know things only by their attributes, and to call a metal *rajatam, argentum*, "the bright," was to assimilate it to the sky and other equally well-known "bright" things.

Now, it is just this epithetic stage of language, this period when man was beginning to question nature, and embody his answers in speech, that is the most fruitful seed plot of mythology. An epithet tends to become a name; there were many more bright things besides *rajatam*, "silver," but the term came in time to be restricted to silver alone. In other cases, however, it might happen that the same epithet was stereotyped into a name for two or more objects which the progress of knowledge showed to have nothing in common except their first superficial appearance. Or, again, the same object or the same class of objects might acquire two or more different names derived from different attributes. Thus the "sky" might be called not only the "bright" spot, *dyaus*, Ζεύς, but also the "azure," *cœlum;* or, again, *heaven*, that which is "heaved" up above the earth. Here, then, was every opportunity for future confusion; and it was not long before the confusion took place.

Synonyms were separated from one another and resolved into different beings, while homonyms that really referred to widely different objects were amalgamated into a single whole. Thus the dawn might be called *Ushas*, ἠώς, "the burning-red,"[1] or *Dahanâ*, *Daphnê*, "the flaming one,"[2] and the two synonyms after losing their attributive meaning and stiffening into proper names became two independent personages, one the goddess of the morning, the other the timid maiden whom the sun-god pursues. But the dawn was not the only object that could be called "the flaming one;" the same name was given by the early Greek to the laurel also, whose leaves blaze and crackle in the fire, and when the older application of the attributive had come to be forgotten, the name Daphnê was confounded with its homonym, δαφνή, "the laurel," into which the poets dreamed their Daphnê had been changed.[3] So, too, Promêtheus was at bottom the *pramanthas* or "fire-machine" of India, the two sticks which are rubbed against one another to produce fire; but transplanted to Greek soil the word lost its original significance, and became a mythological name for which a new etymology had to be sought. And the new etymology was readily found. Though *pramanthas* in the sense of a fire-machine did not exist in Greek, the same root had given rise in that language to the verbs μανθάνω and μήδομαι with a mental and not a material signification, and in place of the Indian compound, the Greek spoke of προμήθεια, "fore-thought," and προμηθής, "provident." And so Promêtheus,

[1] Root *ush*, "to burn."
[2] Sanskrit root *dah* (= *dabh*), "to burn."
[3] Max Müller: "Lectures," ii. pp. 548-9.

the fire-bringer, was transformed into the wise representative of forethought, who stole the fire of heaven for suffering but finally victorious humanity, and had as his brother Epimêtheus, "Afterthought." Myths are the creation of language, and whenever in the history of language expression outstrips thought, we shall have a mythopœic age.

The character of a myth, consequently, cannot be uniform, any more than the language from which it is born. Language embodies the ideas and beliefs, the emotions and knowledge of the community that speaks it, and will therefore be as many-sided as the ideas and emotions themselves. Hence there will be a mythical geography and a mythical philosophy as well as a mythical theology, or, if the phrase may be allowed, a mythical history. Man has to struggle through myth to science and history, to be the victim of his own speech before he recognizes that he is its master. Just as tribal life precedes the recognition of the individual, so must language, as the product and mirror of the community, dominate over the individual until he has come to know his own freedom and his own worth. To the child and the savage words are real and mysterious powers; it needs a long training before they can become "the wise man's counters." And so philosophy begins with its Eris and its Erôs, its Nêstis and its Aïdôneus, as in the Epic of Empedoklês,[1] while the Odyssey is the first textbook of European geography. The religious halo which surrounds the larger number of myths is mainly due to

[1] See Plutarch: "De Plac. Phil." i. 30.

the prominent place occupied by religion in fostering the earliest intellectual efforts of the race. Religious myths differ from others only in being more hallowed and venerable, and, therefore, in being more permanent. Had it not been for the religious sanction with which they were handed down, there are numberless religious myths that would have quickly perished as soon as their incompatibility with the axioms of existing knowledge became manifest. It was only because of the religious truth they were supposed to veil and inculcate, and the sacred associations that had gathered around them, that they were remembered and handed on, that violent attempts were made to reconcile them with the beliefs and science of a new generation, and that no process of interpretation was considered unnatural which proved them to be in harmony with the spirit of a later age.

But every myth, whether religious or otherwise, must have a setting in place and time. The fairy-world to which it belongs is yet a world, with a history and a geography of its own. Hence old myths come to be fastened on persons or localities that strike the popular imagination, and are made the centres of tradition. Around the founder of a faith like 'Sakya Muni Buddha or a king and conqueror like Charlemagne, there gather the tales that have descended from the past, and form a mythical Buddha and a mythical Charlemagne by the side of the historical ones. The immemorial story of the storming of the bright battlements of the sky by the powers of darkness, and the death of the sun at the western gate of heaven in all the glow of his youth and strength, was transferred first to the struggles of Bœotians

and Phœnicians round the citadel of Thebes, and then to the long contests waged on the coasts of Asia Minor by the Greek colonists and the defenders of "windy Troy." To look for grains of history or ethnology in such tales as these is like the search for gold in the rays of the sun. The facts of history must be collected from ordinary historical sources, from monuments and inscriptions and contemporaneous literature; the myth *may* contain a historical kernel, may be based on a historical tradition, but we cannot know this from the myth itself, nor can we separate from one another the elements of myth and history. The one is a reflection of objective facts, the other of words and thoughts. Mythology will enable us to trace the growth of the human mind; its outward development in the world of action and history must be recovered by other means. It is not from the Homeric poems but from the discoveries of Dr. Schliemann at Mykenæ, that we are assured of the existence of a powerful dynasty, and of a rich and civilized state in the old Achæan Peloponnesus; and it is the same monumental evidence, combined with similar evidence from elsewhere, that verifies the legend which brought Pelops from Lydia with the wealth of the Paktôlus, or ascribes the prehistoric culture of Hellas to strangers from the East. The memory of the past perishes quickly from the minds of the untrained and the uneducated; the battle of Minden in 1759, little more than a hundred years ago, is utterly forgotten by the peasantry of the neighbourhood, and all that Skanderbeg's countrymen remember of him is a miraculous escape that never took place, while the oldest Albanian genealogy cannot mount beyond eleven ances-

tors.[1] Sir G. C. Lewis reminds us of the game in which a story is whispered from ear to ear through a circle of players, and the first and last versions, when compared together, are invariably so unlike as to seem to have nothing in common. What the uninstructed man remembers is the tale told again and again round the fire in winter, full of marvels and prodigies, but reflecting in every detail the experiences of his own every day life. This is what the grandam and bard will hand down from generation to generation, especially if adorned with verse or rhythm. From time to time a new incident or a new name taken from current events will be woven into it, to mislead the would-be historian of a later day, and confound once more the distinction between history and myth. But for the most part the incidents and names belong alike to cloudland. It is not the unmeaning names of living personages, but the significant epithets of venerable legend that imprint themselves upon the popular memory. The name of Cyrus, it is true, is a historical one, but not so that of his opponent Astyages, the Persian *Aj-dahâk*, or Zohak, "the biting snake" of night and darkness, and the story which Herodotus has selected as the most credible of the various ones related concerning the birth and bringing up of Cyrus, is but the old Aryan myth which is told of every solar hero. The William Tell of our childhood, who splits the apple with his arrow without hurting the boy on whose head it was placed, and successfully arouses "the three cantons" of Uri, Schwytz, and Unterwalden, to alliance and resistance against the German Empire, is but a double of the Palna-

[1] Von Hahn: "Sagwissenschaftliche Studien," i. pp. 62, 63.

Toki of Norway, and the William Cloudeslee of English folklore. William and Tell are equally unknown names in the Oberland of the fourteenth century, no Gesler can be found among the bailiffs of Zürich; and when the Emperor Albert visited the Swiss he met with nothing but loyal hospitality. The confederation of the three Cantons was solely for defence and internal organization; they were the steadfast upholders of the German Empire in the person of Louis of Bavaria, and the battle of Morgarten in 1315 was fought in defence of the latter against the pretensions of Frederick and the Hapsburg House.[1]

Equally instructive is the curious legend of Pope Joan, which has been minutely examined by Döllinger and illustrates the readiness with which a myth will spring up among an ignorant and uneducated multitude even in the midst of contemporary literature. But perhaps the most remarkable example is afforded by the Nibelungen Lied, the great Epic of the Germanic nations, since here history and myth seem at first sight to have coalesced, and legend to have occupied itself with the names and fortunes of historical characters. The story of the Nibelungs or Cloud-children, as we find it in the German Epic of the twelfth century, can be traced back to the story of Sigurd in the Scandinavian Edda, and the old Saxon legend of Dietrich of Bern. Sigurd is the Siegfried of the Teutonic version,

[1] See Rilliet: "Les Origines de la Confédération Suisse," 2nd edition (1869); Hungerbühler: "Étude critique sur les traditions relatives aux Origines de la Confédération Suisse" (1869); K. Meyer: "Die Tellsage" (in Bartsch: "Germanische Studien," i. pp. 159-70), 1872; Vischer: "Die Sage von der Befreiung der Waldstätte" (1867); Liebenau: "Die Tellsage zu dem Jahre 1230 historisch nach neuesten Quellen untersucht" (1864).

who gains possession of the golden sunbeams, the bright treasure of the Niflungs, by slaying Fafnir, the serpent of winter, and after delivering Brynhild from her magic sleep is made by Gunnar to forget his betrothed and marry her daughter Gudrun or Grimhild. But his unfaithfulness is speedily avenged. Sigurd is murdered by Gudrun's brothers, and Brynhild burns herself on the funeral-pyre of Sigurd, like Herakles, the Greek sun-god, on the peak of Œta. Not yet, however, has the fatal treasure wrought its full measure of mischief. Atli, the brother of Brynhild, takes vengeance on the murderers, and Swanhild, Sigurd's posthumous son, is slain by Jörmunrek. In the Saxon story Atli is replaced by Etzel, the younger son of Osid, the Frisian king who conquers Saxony from King Melias, and lives in Susat, now Soest in Westphalia, while the Nibelungs or Cloud-children dwell at Worms, and Dietrich rules in Bonn, the earlier name of which was Bern. In the redacted Epic of the twelfth century the legend has entered upon a yet newer phase. Bern has become Verona, Dietrich Theodoric, the famous Gothic conqueror of Italy, and Etzel Attila the Hun. The Jörmunrek of the Icelandic myth is transformed into Hermanric, the Gothic king at Rome, Siegfried himself is identified with Siegbert of Austrasia, who reigned from 561 to 575, married Brunehault, defeated the Huns, and was murdered by his brother's mistress Fredegond; while Gunther, the Gunnar of the Edda, assumes the character of the Burgundian Gundicar, the victim of Attila. The coincidences between the myth and actual history seem too numerous and striking to be the mere result of accident. And yet such is the case.

The Attila of history died in 453, two years before the birth of the historical Theodoric, and Jornandes who wrote at least twenty years before the death of the Austrasian Siegbert, was already acquainted with the name and story of Swanhild, the child born after Sigurd's death. If more were needed, the Icelandic and Saxon versions of the legend would prove its mythic antiquity. The historical colouring thrown over it by the version of a literary age is but deceptive; the old Teutonic story of the waxing and waning of the summer-sun was told and sung long before the time of Gundicar and Attila, long, in fact, before the beginning of the Christian era. Just as the untaught peasant will invent an etymology for a word or name he does not understand, and connect it with what is familiar to him, so the literary artist will find a place in history for the personages of mythology, and identify their names with those of which they remind him. No doubt, as we have already seen, a popular myth will sometimes absorb the name and deeds of a historical character; no doubt, too, a real person may sometimes bear a name famous in legend, and essay to emulate the actions of his mythical namesake, thereby becoming himself in time a figure of myth; but such cases lie outside the sphere of the historian; without other evidence he cannot separate the true from the false, the facts of history from the creations of fancy.

The puzzle over which the philosophers of Greece laboured in vain has thus been solved. Myths originate in the inability of language fully to represent our thoughts, in changes of signification undergone by words as they pass through the mouths of successive gene-

rations, and in the consequent misinterpretation of their meaning and the growth of a dreamland whose sole foundation are the heirlooms of bygone speech. Language, therefore, can alone explain mythology, and in the science of language we must look for the key which will unlock its secrets. It is by tracing back a word to its source, by watching the various phases of form and sense through which it has passed, that we can alone discover the origin and development of a myth. The work, in fact, consists in tracking out the true etymologies of words, as opposed to those false etymologies which are of themselves the fruitful causes of mythology and effectually prevented the scholars of the past from probing its mystery. The discovery of true etymologies has been made possible by comparative philology, and comparative philology, accordingly, is the clue by the help of which we can safely find our way through the labyrinth of ancient myth. Without its aid, it is unsafe to attempt the explanation of even the simplest myth, and where its aid fails us, the solution of a myth is out of the question. It is only where the proper names are capable of interpretation that the source—the etymology, as we may call it—of a myth can be discovered. Where they still resist analysis the myth must remain like the words of which the lexicographer can give no derivation.

Like the lexicographer, too, the mythologist must group and compare his myths together. Just as a multitude of words can be followed back to a single root, so a multitude of myths, differing in form in their historical and geographical setting, may all be followed back to a single germ. An attempt has been made to reduce the

manifold myths and folk-tales of the Aryan nations to about fifty originals, and whatever may be the value of the attempt, it is certain that the kaleidoscope patterns which the imagination of man has woven out of a few primæval household tales are almost infinite.

But care must be taken to compare together only those myths which belong to the languages shown by comparative philology to be children of a common mother. Where language demonstrates identity of origin, there will be identity of myths; but not otherwise. To lump together the legends of Greeks and Romans, of Fins, of Kafirs, and of Australians, will lead only to error and confusion. It is but to repeat the old mistake of the "philologists" of the last century, who heaped together words from the most diverse languages of the globe because they happened to be alike in sound and sense. The mind of primitive man is similar wherever he may chance to live, and the circumstances that surround him are much the same; his ideas, therefore, and his expression of them, will present what may seem to many a startling resemblance; the same problems will present themselves to him, and his answers will be of the same kind. The likeness in form and sentiment between the hymns of the Rig-Veda and the hymns of the early Accadians of Babylonia is frequently surprising; nevertheless we know that there could have been no contact between the Rishis of India and the poets of Chaldea. The hare is accounted unclean by the Kafirs just as it was by the Jews and the Britons; but for all that the belief must have fixed itself independently among each of the three peoples. It is not more strange

to find a general likeness between the adventures of solar heroes, whether among Indo-Europeans, Fins and Tatars, or South Sea Islanders, than it is to find the primitive races of the world explaining the phænomena of sunrise and sunset in the same way. Weeds will grow up everywhere, should soil and climate suit, but we are not obliged to assume that they all belong to one genus or one species, or have all come from one primæval home. It is enough for us to compare the myths of a single family of speech; to group together those of them that are alike, noting the points in which they differ, the transformations they have undergone, and the several modes in which they have been fashioned and adapted. The story of Baldyr is but the story of Akhilles in a new form; the siege of Troy is but a repetition of its earlier siege by Hêraklês, or of the two sieges of Thebes by the seven heroes and their descendants; the legend of Cyrus and Astyages is the legend of Romulus and Amulius, of Perseus and Akrisius, of Thêseus and Ægeus.

Now and then, it is true, the resemblances between two myths belonging to unallied families of speech extend to details which may seem to us of the most trivial character. But it does not follow that they were so in the eyes of the men of the mythopœic age. The same train of reasoning from the same set of supposed facts will end in the same conclusions, and a myth, it must be remembered, embodies the first childlike knowledge of the world about him possessed by primitive man, and the conclusions which he drew from it. Coincidences have been pointed out between the story of Jack the Giant-

Killer and the Kafir story of Uhlakanyana, who tricks the cannibal and his mother, to whom he had been delivered to be boiled,[1] but coincidences do not of themselves point to a common origin. And the comparative mythologist, like the comparative philologist, must always be on his guard against cases of borrowing. Myths and legends can be borrowed as readily as words, and, indeed, even more readily. A large part of the mythology of ancient Greece, we now know, was derived from Babylonia, partly through the fostering hands of the Phœnicians, partly along the great highway that led across Asia Minor. The Babylonian original of the myth of Aphroditê and Adônis has been recovered from the clay library of Nineveh, and the story of Hêraklês and his twelve labours may now be read in the fragments of the great Chaldean epic, which was redacted into a single whole about two thousand years before the birth of Christ. It would be worse than a mistake to treat as a pure and native myth the hybrid conception which resulted from the amalgamation of Herculus, the old Italian god of enclosures, with the Greek Sun-god Hêraklês, or of Saturnus, the patron of "sowing" and agriculture, with Kronos, who owed his existence to his son Kronion (or Khronion), "the ancient of days." Nor is it so easy as it would appear at first sight to distinguish between what is native and what is borrowed. When once a myth has been adopted from abroad it is taken up into the popular mythology; its foreign features are gradually lost; the proper names

[1] See Bishop Callaway: "Nursery Tales, Traditions, and Histories of the Zulus," i. 1 (1866).

about which it clusters are changed or modified in form. It is not often that we have to deal with so plain a case as the story of Melikertes, whose name has remained the same as that of the Tyrian Melkarth, "the city's king," or that of Aphroditê and Adônis where Adônis is still the Semitic *'adônai*, the "lord" of heaven. Other tests are more often needed for determining the home-born origin of a myth. Does it harmonize with the general character of the mythology? is a similar tale or group of tales found among an alien race, with whose mythology it is in better accord? can we trace its passage from one part of the world to another? These are the questions which we have to ask ourselves. The story of the Kyklôps in the Odyssey, adapted as it has been in both form and proper names to the genius of Greek speech, yet stands isolated in Aryan mythology. We seem to hear in it an undertone which harmonizes but ill with the familiar cadence of Aryan myth. And it is just this story of the Kyklôps which finds its analogues in the folklore of non-Aryan tribes.[1] The one-eyed giant who lives on human flesh, and is finally blinded by a hero whom he entraps into his cave, but who escapes under the belly of a sheep or ram, and then taunts the monster, reappears among the Turkish Oghuzians, where he is called Depé Ghoz or "Eye-in-the-Crown," the hero himself being named Bissat.[2] In the Finnish version of

[1] See W. Grimm, in the "Abhandlungen der Akademie der Wissenschaften zu Berlin" (1857); Rohde: "Der griech. Roman," p. 173, note 2; and Sayce: "Principles of Comparative Philology," 2nd edition, pp. 321-23.

[2] Diez: "Der neuentdeckte oghuzische Cyclop verglichen mit d. homerischen" (1815).

the tale as given by Bertram, the hero's part is played by Gylpho, a poor groom, the Kammo or Kyklôps having a horn in addition to the one eye in the forehead, and being not only blinded but also put to death, as in the Oghuzian tale; but no mention is made of the hero's escape by the help of the sheep. In the Karelian legend reported by Castrén,[1] the Kyklôps is made human by having two eyes assigned to him, while the Esths have Christianized the myth, telling how a thresher once blinded the eyes of the devil under the pretext of curing them, and, as in the Odyssey, lost him the sympathy of his friends by giving his own name as *Issi* or "Self." In the Oghuzian version the story is amplified by a magic ring which the Kyklôps presents to the hero, and which in other versions clings to the latter's finger, or compels him to shout out, "I am here;" and this addition has apparently been rationalized in the Odyssey. If so, there can be little doubt as to where we must look for the most primitive form of the story, and when we remember that the Turkish tale is also found among the Finnic members of the Ugro-Altaic family, while it stands isolated in Greece, notwithstanding the three Graiai of Æschylus with their one eye between them, it would seem that the Greek myth was a borrowed one, and that its origin must be sought among the tribes of Turan. And yet a doubt is cast upon this conclusion by our finding that among the fastnesses of the Pyrenees, the Basques, too, have preserved a legend of the Tartaro or One-eyed Kyklôps, which seems almost the sole fragment of their existing folklore that has not been

[1] "Reseminnen från åren" (1833-44), p. 87.

borrowed from abroad.[1] Among the forms assumed by the legend is one that describes how the man-eater lived in a cave, where he is challenged by one of three brothers. The latter lops off one of the arms of the Tartaro and renewing the challenge next day lops off his head, then kills several more Tartaros, fights a body without a soul, and delivers the three daughters of a king. It is certainly more probable that the traveller's tale recorded by the poet of the Odyssey was received from races in the Western Mediterranean, of whom the Basques may be the last surviving relics, than that it came from the interior of Asia, from barren lands where the Ural-Altaic hordes were settled. But what is most probable is not therefore always the most true. M. Antoine d'Abbadie has met with a story similar to that of the Kyklôps and the escape of Odysseus under the belly of a ram among the tribes of Abyssinia, and the story can be traced back to the far east of Asia long before the days in which the Odyssey took its present shape. Herodotus tells us[2] how Aristeas of Prokonnesus, in his poem of the Arimaspea, described the Arimaspi or "One-eyed men," who lived beyond the Issedones and the Scythians in the extreme north-east, where they bordered on the gryphons, whose task it was to guard the hidden treasures of gold. Now the Arimaspi of Aristeas must be identical with the one-eyed men of the Chinese "Shan Hoi King," an old book of Monsters, which claims to have been written in the twelfth century B.C., and the illustrations of which, at all events, go back to the time of

[1] Webster and Vinson: "Basque Legends" (1877).

[2] iv. 13, 27.

the Han dynasty. These one-eyed men are described as living beyond the western desert of Gobi, and the portrait of one of them which is given exactly represents the Polyphemus of Greek legend, with a single eye in the centre of the forehead, and a general appearance of wild barbarism. Along with this account of the Kyklôps, the Chinese writer gives a further account of certain small men covered with hair inhabiting some islands to the east, as well as of diminutive pygmies who come from the same neighbourhood as the Kyklôps, and have to walk arm in arm for fear of being picked up and eaten by the birds. The hairy men from the islands in the east are plainly the Ainos of Japan, not yet it would appear colonized by Japanese when the "Shan Hoi King" was composed, while in the pygmies we recognize at once the pygmies of the Iliad [1] and of Aristotle,[2] to whom, on the shores of the circumambient Ocean, the cranes "carry slaughter and death." The primæval source of the two old Greek stories thus becomes manifest: it was from the frontiers of China, through the medium of the Scythian caravan-trade, that the tales of the Arimaspi and the pygmies were brought to Greece, and just as the tale of the pygmies has been incorporated into the Iliad, so the tale of the Kyklôps, in much the same form as that in which it has survived among Turks and Fins, has been incorporated into the Odyssey. The tale is indeed a borrowed one, but it was borrowed from the east and not from the west. The Basque Tartaro, like the Kyklôps of Abyssinia, would have come in all probability from Asia, possibly through the hands of the Greeks themselves, pos-

[1] iii. 6. [2] H. A. viii. 12, 3.

sibly in some other way. The strange idea of a body without a soul which has been embodied in the Basque myth, is certainly of foreign origin. Miss Frere, in her "Old Dekkan Days," tells us that she has heard the story in Southern India, and far away in the north the Samoyeds have a legend of seven robbers who hung up their hearts on a peg and were destroyed by a hero, whose mother they had captured, with the help of a Swan-maiden, whose feather-dress he had stolen. A similar legend was met with by Castrén among the Fins, of a giant who kept his soul in a snake which he carried in a box with him on horseback, and the Norse story of the giant without a heart in his body, given by Dr. Dasent,[1] seems to have been derived by the Scandinavians from their Finnic neighbours. Before we can use a myth to establish the common origin of those among whom it is found, we must be quite sure that it is not borrowed. Language is no test of race, merely of social contact, and so, too, the possession of a common stock of myths proves nothing more than neighbourly intercourse.

We need not linger long over the objections that have been raised to the method and the results of comparative mythology. All new things are sure to be objected to by those who have to unlearn the old. It is hard for scholars who have spent their lives in extracting profound lessons of philosophy or science out of the symbolic myths wherein they had been wrapped by our highly gifted grandsires, harder still for those who would discover in these ancient legends facts of history or echoes

[1] "Norse Tales," pp. 64, *sq.*

of revealed truth, to admit that their search and labour have been all in vain. It has been urged on the one hand that the comparative mythologist would assign too high an imagination to primitive man, whom he transforms into a poet ever busied in contemplating the ceaseless changes of nature and life; on the other hand, that he makes the mythopœic age one of dull stupidity and feeble imagination, in which the phænomena of the atmosphere engrossed the whole attention of men who were yet too witless to understand the language in which they were described. But such mutually destructive objections are readily answered. The men who described the toils of the sun and the fading of the dawn in language that soon passed into myth were endowed neither with too high nor with too feeble a phantasy. The gods they worshipped were the gods that brought them food and warmth, and these gods were the bright day and the burning sun. Eagerly did they watch for the rising of the dawn and the scattering of the black clouds of night and storm, because "man goeth forth unto his work and his labour until the evening," and the needs of life have to be satisfied ere then. It was not stupidity, but the necessities of his daily existence, the conditions in which his lot was cast, that made man confine his thought and care to the powers which gave him the good gifts he desired. Winter, according to the disciples of Zoroaster, was the creation of the evil one, and among the first thanksgivings lisped by our race is praise of the gods as "givers of good things." As Von Hahn has pointed out[1] the small part played by the moon in mythology is due to the little share it has in providing

[1] "Sagwissenschaftliche Studien," p. 92.

for human wants. It is only among the Accadians of Chaldea, that nation of astronomers and astrologers, that the moon takes the place denied to it elsewhere. Though Accadian mythology, like all other mythologies, is largely solar, it is also largely lunar. The Moon-god stands above the Sun-god, whose father he is held to be; it was from him that the royal race traced its descent, and to him were erected the lofty towers which served at once as temples and observatories. What clearer proof can we have that the character of a mythology is determined by the material needs and circumstances of those that formed it, or that the mythopœic age is one in which those needs are still keenly felt?

The men of the mythopœic age, however, were not savages, nor were those who interpreted to them the mysteries of the world mere stolid boors blind to the beauties of nature. The powers that seemed to give them the blessings they asked for were invested with human action and human feeling. But it was because they could not do otherwise. The language in which they spoke of their gods may appear to us imaginative and poetical; but it was the only language they could use. Man attributed his own passions, his own movements, to the forces of nature, not because he was a poet, but because he had not yet learned to distinguish between the lifeless and the living. He clothed the deep things of the spirit in sensuous metaphor and imagery; but it was because he had not yet realized that aught existed which his senses could not perceive. The objects of his thought and its expression were limited, because the objects of his worship were limited; but few as they were,

they were more than enough for the rich outgrowth which reached its noblest perfection in the gorgeous mythology of Greece. The hymns of the Rig-Veda, the oldest monument of our Aryan race, which have founded the science of language, have founded also its younger sister, the science of mythology. Here, at any rate, we have the touchstone by which we can test the soundness of our theory; here we may see the names and phrases, not yet emptied of their earliest metaphorical meaning, beginning to pass into the myths of a later day. As words and grammatical forms which had lost almost all trace of their original sense in the idioms of Europe suddenly received new life and significancy when compared with the language of the Rig-Veda, so the myths and folklore of Greece and Rome, of Germany and Gaul and Slavonia, yielded up their secrets and revealed their primitive meaning when read in the light of the epithets and utterances which the old Hindu bards addressed to the Sun-god or the Dawn. Why must every myth, it has been asked, be resolved into a solar hero or a dawn-maiden? Why this wearisome monotony of subject, this vague and indefinite sameness of adventures? The answer is an easy one. Apart from the fact that there are many myths which have been shown by a scientific analysis to have nothing to do with either the sun or the dawn, and many more which as yet defy our efforts to analyze them, primitive man cared to coin epithets for none but those bright powers of nature from whom he believed his benefits to come, and the Rig-Veda, accordingly, demonstrates beyond dispute that the greater part of the myths of our

Aryan race *are* derived from the faded metaphors applied to the sun and the dawn, and from no others. And not the Rig-Veda only, but the mythologies of other nations when closely questioned testify to the same fact. Whether we turn to the myths of Polynesia,[1] of Fins and Tatars, or of ancient Chaldea, we find them centering round the same or similar phænomena of nature, and taking upon them similar forms. And thanks to the agglutinative character of the languages, the proper names in these cases have generally remained clear and transparent, preventing all mistakes as to the first origin and meaning of the myths.

But there is always a danger that a hobby may be ridden too hard. The solar explanation of myths has been extended by some writers far beyond its legitimate limits. We may admit that a large part of the myths we can analyze have a solar origin, and yet hold that there are many to which such an explanation does not apply. If mythology is the misunderstood summary of the beliefs and knowledge of primitive man, it will include much more than his conceptions of solar and atmospheric phænomena; we shall find it a record of all his ideas regarding the world around him. As a matter of fact, there are numberless myths, both Aryan and non-Aryan, which can be proved to have another origin than a solar one. There are myths relating to the storm-clouds, to the stars, to eclipses of the moon, even to the creation of the earth and sea and living beings, from which the solar

[1] See the New Zealand stories of Maui, the Sun-god, in Tylor's "Primitive Culture," pp. 302, 309, and Gill: "Myths and Songs from the South Pacific" (1876).

element is altogether absent. To confound the so-called "Solar Theory" with comparative mythology, is to show an entire ignorance of the method and results of the latter. Nor must it be forgotten that there are many myths of which we shall never know the true source and derivation. We may guess at it in some cases, but like doubtful etymologies, our guesses can never become certainties. And where comparative philology sheds no light on the meaning of the proper names, even a guess is inadmissible.

Two more objections still remain to be dealt with. On the principles followed by comparative mythologists, it is said, any story of life and death and marriage, any tale in which the hero migrates from east to west, or dies in the prime of his career, ought to be received into the circle of solar myths. So vague and general are the features attributed to the myth, so elastic the limits by which it is confined, that it is possible to transmute almost any individual into an image of the sun. But here, again, the objection lies not against comparative mythology, but against a misuse of it. Comparative mythology is but a branch of comparative philology, and must be content to follow, not to lead. Only where a scientific analysis of the proper names reveals their original character may we compare two or more myths together within the same group of languages, and determine their primary form and significance. Herâklês is a solar hero, not only because his life and labours are those of other solar heroes, but because his own name discloses his derivation from *swara*, "the splendour of heaven," like that of the goddess Hêrê, while the names of those with

whom he comes into contact, Augeias, Deianeira, Iole, have equally to do with celestial phænomena.

The other objection is based on the fact that a myth is frequently peculiar to a single locality, or met with only in writers of late date. But from its very nature a myth will clothe itself with an infinity of different forms, adapting itself to the conditions of place and time, and taking the colour of each country and age. Just as some old word or old form of the highest value to the etymologist may linger on in some sequestered corner, so an early form of a myth may survive in the mouths of a few illiterate peasants to be discovered by the antiquarian or book-maker of a late date. The Greek legend of Kephalos and Prokris is not found in literature before the time of Apollodorus and Ovid, and yet the scientific analysis of it shows that its roots must go back to a hoar antiquity. Prof. Max Müller has explained Prokris by the help of πρώξ, "a dewdrop," and the Sanskrit roots *prish* and *prush*, "to sprinkle," and when we know that Kephalos, the son of Hersê, "the dew," is but an epithet of the sun, as is "the head" of the horse in the Veda, the signification of the whole story becomes clear. Prokris is slain unintentionally by Kephalos while jealously watching him through fear of her rival Eos, just as the dew in the early morning is parched up by the first rays of the rising sun.[1] In modern Greek folklore we seem to find fragments of tales which the Greeks brought with them to Hellas, and which yet were never noticed by those of their writers whose works have come down to us, tales like the μῦθοι, which Amphitryon advises to be told to the children in

[1] Max Müller: "Chips from a German Workshop," ii. 87-91.

the "Hercules Furens" of Euripides,[1] or of which Aristophanes once quotes the opening formula.[2] In this modern folklore Kharon is the god of death, not the grim ferryman of the Styx, and when we remember that he performs the same functions in the paintings of the Etruscan tombs, it becomes probable that side by side with the literary representation of him went another, possibly more popular, possibly provincial, in which he took the place of Aides.

If the mythopœic age is one through which all races of men must pass who have lifted themselves above the lowest savagery, it is evident that it cannot be confined to those languages in which gender and sex are denoted, as Dr. Bleek maintained.[3] The indication of gender is an accident of language, the creation of myths a necessity. No doubt the process is largely aided by the existence of gender: personification becomes much easier, the transition of an epithet into a proper name much simpler. Indeed, to indicate sex is of itself to mythologize; the sailor who speaks of his ship as "she," is using the language of myth. The very fact that Prokris was feminine caused the word to be regarded as a woman's name when its original meaning was lost; and Bleek may be right in holding that the beast fables of the Hottentots have some connection with the sex-denoting character of their dialects. But the connection cannot be a necessary one,

[1] ll. 98-101. See also Plutarch: "Thes." 23; Plato: "Gorg." p. 527 A.

[2] "Wasps," 1182. Cf. Schmidt: "Griechische Märchen, Sagen und Volkslieder" (1877), Introd., especially pp. 11-13.

[3] See "A Comparative Grammar of South African Languages," i. (1862), pp. ix.-xi., and "Report."

since the Bushmen, who above all the races of Southern Africa are distinguished by their love of the beast fable, know nothing of the distinction of gender, while the genderless Accadian possessed a richer and more developed mythology than the Semite, who divided his nouns into masculine and feminine. In fact, we now know that much of the Semitic mythology was simply borrowed from the older mythology of Accad. Go where we will, all over the world we find mythology; it is inseparable from the growth of language, whose offspring it is. The grammar of a language can do no more than determine the proportions the mythology will attain and the exact forms it will assume.

Myth, folklore, fable, allegory—all these are related terms, but terms to be kept carefully apart. A myth is the misinterpreted answer given by the young mind of man to the questions the world about him seemed to put. It is the speculation of a child which the grown man has treated as though it were the utterance of his own mature thought. The term folklore is of vaguer meaning. It embraces all those popular stories of which the fairy tales of our nursery are a good illustration, but from which the religious element of mythology is absent Their proper names, too, are for the most part incapable of analysis; the distance that separates them from their original source and centre is too great to be spanned even by the comparative philologist. Popular etymologies doubtless abound in them, but such etymologies remain comparatively unfruitful, changing or modifying only an unessential portion of the story, and not its whole character. The attempt to explain nature which lies at the

bottom of a myth is altogether wanting, or if it were ever present has been so obscured and effaced as to be utterly unrecognizable. Though the figures of mythology may move in the folklore of a people they have changed their form and fashion; the divinity that once clothed them is departed; they are become vulgar flesh and blood. It is true that it is often difficult to draw the line between folklore and mythology, to define exactly where the one ends and the other begins, and there are many instances in which the two terms overlap one another; but this is the case in all departments of research, and the broad outlines of the two types of popular legend stand clearly distinct. It is a mere misuse of the term to include myths, as is sometimes done, under the general head of "folklore." [1]

The precise relation of mythology and folklore is still a disputed question. There is much folklore which can be traced back with certainty to faded myths. The tale of the sleeping beauty, for example, is but a far-off echo of the old myth which described the sudden awakening of nature at the approach of the spring sun, and the myth of the Kyklôps can only be excluded from the category of folklore by seeing in the name of the monster a living reminiscence of the sun, "the round eye" of heaven. A tale collected by Schmidt in Zante,[2] recounts how an armed maiden sprang with lance and helmet

[1] The two Grimms, in their Preface to the "Deutsche Sagen" (1816), p. v., state that the peculiarity of a myth consists "in its referring to something known and consciously conceived, to some place or some name which is verified by history;" but this definition does not hold good in all cases (see Bechstein: "Deutsches Märchenbuch," 1st edition, 1847, p. iii.).

[2] "Griechische Märchen," &c., p. 77.

from the swollen calf of an unmarried king, and in this we cannot refuse to see a survival of the story which made Athena, the dawn-goddess, spring from the head of Zeus. But there are many other nursery tales which can be forced into a connection with known myths only by arbitrary and unscientific theorizing. And among these nursery tales we find the same resemblance, the same apparent bond of union, as among the myths by which they are accompanied. Not only can the same kind of likeness be pointed out in the folklore of allied languages and dialects, but also in that of unallied families of speech. The fact which the comparative method has shown to hold good of mythology, holds good of folklore also. And the fact has to be explained in the same way as in the case of mythology. When, for instance, we find Kafir legends of Uhlakanyana which present numerous points of analogy with the story of Jack-the-Giant-killer, or when we come across tales among Eskimos, Mongols, and the Karens of Further India which resemble what the Greeks told of the Symplegades, or of Kharybdis and Skylla, we must remember how much alike are the minds of half-civilized men, and the circumstances amid which they live. When, again, we find a compact body of folklore existing among the scattered members of the Aryan family, and by its close agreement pointing to a common origin, we are justified in holding that it must have grown up before the division of the Aryans, and been carried by them far and wide into their new settlements.[1] But as in mythology, so in folklore,

[1] For arguments in favour of the priority of nursery tales to myths, see A. Lang in the "Fortnightly Review," May, 1873.

we must be on our guard against assuming that to be native and original which is really borrowed. Benfey, indeed, has gone too far in affirming that almost all the folklore of modern Europe has migrated from India since the beginning of the Christian era, and the existence in the eighth century of the romance of SS. Barlaam and Josaphat, the latter of whom is but Buddha in Western disguise, has obliged him to modify his first theory, which placed the introduction of it as late as the tenth century and the closer contact of the Mahommedans with India.[1] Some portion at all events of the tale of Love and Psychê in Apuleius, which Friedländer has successfully compared with modern German and Hindu tales of the same kind,[2] must go back beyond the time when there was any intercourse between India and the Mediterranean. Nevertheless, there can be little doubt that folklore travels more easily than mythology, and that the literature of the nursery, and we may also add of the monasteries, was largely enriched by the Crusades. The "Gesta Romanorum" or the "Romance of Dolopathos," translated from a Latin work of John the Monk into Latin verse about 1225 A.D., will illustrate the extent to which the borrowing went on, and the "Decamerone" of Boccaccio, like the Fables of La Fontaine, bear on almost every page the stamp of their eastern origin.[3] The fables

[1] See his Preface to the translation of the "Panchatantra" (1859), pp. xxii. *sq.*

[2] "Dissertatio qua fabula Apuleiana de Psyche et Cupidine cum fabulis cognatis comparatur," in two University Theses (Königsberg, 1860).

[3] See Max Müller: "On the Migration of Fables," in "Chips from a German Workshop," iv. pp. 145-209.

of the Hindu Panchatantra or "Pentateuch," a collection which owed its existence in the first instance to the Buddhist teachers, and is at least as old as the third century of our era, have been carried not only into Europe, but also into Tibet and Mongolia, among Tatars and Ugric tribes. The "Basque Legends," published by Webster and Vinson, are equally for the most part importations from abroad. There are few among them which we cannot recognize in a more primitive form among the inhabitants of Southern France, the Slavs of Eastern Europe, or even the Keltic population of the Western Highlands. The readiness with which a folklore passes from country to country, is a fresh proof of the avidity with which the mind of the uninstructed man seizes upon such intellectual food, and the fidelity with which it remains stored up in his memory. What "a good story" is to the lounger in the clubs, a nursery tale is to the untaught peasant. Like "good stories," nursery tales, of course, are modified by those who borrow and repeat them. They have to adapt themselves to their new abode, to catch the colour of the scenery and the life in the midst of which they find themselves. The elephant of the Indian tale becomes a horse, the founder of Buddhism a Christian saint.

The fables of the Panchatantra have been necessarily included under the head of folklore. But there are many fables which could not be so included, and in any case fables constitute a class of popular tales apart by themselves. It is only when the fable is, so to speak, unconscious, when it has not been composed with the deliberate purpose of conveying a lesson, that it ought strictly to be

regarded as a part of folklore. The consciously devised fable is a curious product, which stands on the very threshold of the literary age, or else is the form of political satire most conveniently resorted to under a despotic government. But the consciously-devised fable is an aftergrowth, an imitation; it is but the later adaptation of an aboriginal species of popular tale. The fable, in fact, differs from other popular legends at the outset in nothing save its introduction of brute beasts as speaking and acting like men. It is only by degrees that its didactic usefulness becomes manifest, and it is made "to point a moral or adorn a tale." The most primitive beast-fables, such as those of the Bushmen and the Hottentots, rarely have any more didactic purpose than an ordinary myth. Human attributes are assigned to the brute creation for the same reason and in the same way that they are to the objects of inanimate nature; indeed, no distinction is drawn in the South African fables between the animals and the celestial bodies; the same peculiar pronunciation is ascribed alike to the moon, the anteater, and the hare. Elsewhere, as among the Polynesians[1] and the Australians,[2] the heavenly bodies are turned into beasts, and the word *Zodiac*, "the circle of animals," perpetuates the same confusion of ideas even among ourselves. But the cause of the confusion is the cause which underlies all mythology. The only way in which primitive man could account for the motions of the sun and moon and stars, was by endowing them with

[1] Gill: "Myths and Songs from the South Pacific," pp. 40-51.

[2] Ridley: "Kámilaróí and other Australian Languages" (2nd edition, 1875), pp. 141, 142.

his own life and powers. As yet no distinction was drawn between the object and the subject; nor could it be until the mythopœic age had passed away. Hence it was that the brute animals were made to talk and behave like man himself, and the same tendency which gave to the myths of one race a physical character, threw the myths of another race into the form of beast-fables. It is not a little curious that the chief home of the beast-fable should be Africa, and especially those backward tribes of Southern Africa whose languages contain in their clicks the bridge that marks the passage of inarticulate cries into articulate speech. It seems as if the same conservatism which has preserved the animal sounds out of which language was developed, has preserved also a sympathy with the animal world, a memory of the close ties which unite us with it. Professor Mahaffy has suggested that Africa, pre-eminently the land of animal-worship, was the first birthplace of the fable, and he reminds us that the first literary essays made by the Vei-negroes after Doalu's invention of a syllabary, were fables about beasts.[1] But the Vei-negroes are not alone in their employment of them. Go where we will among the native races of Africa we shall find the beast-fable occupying a peculiar and almost isolated place. Such literature as they possess consists almost wholly of beast-fables. Beast-fables were known among the Egyptians at least as early as the reign of Ramses III., and used by them to satirize the government and caricature the kings. But it is possible that, like the clicks, the beast-fable also radiated from one source—the race now known as

[1] "Prolegomena to Ancient History," p. 391.

Bushmen. It is among them that it exists in its fullest and most original form, and it is among them, too, that the art of drawing animals with considerable skill has been cultivated from time immemorial, as is evidenced by the rock paintings of Southern Africa. Even with the imperfect materials we possess at present, it is possible to trace the diffusion of certain fables from a primitive Bushman source. Thus the hare plays much the same part in these African fables that the fox does in our European ones, and fables that illustrate the superior cunning of the hare can be traced from the Bari of Central Africa [1] through Malagasy, Swahili, Kafir, and Hottentot back to the Bushmen, where he is associated with what Dr. Bleek calls "a most unpronounceable click," [2] not otherwise found in the language. But though we may regard the Bushmen as disseminators of the beast-fable through the continent of Africa, it is impossible to doubt that it has grown up independently elsewhere also. Thus among the remains of the library of Nineveh are fragments of fables, one of which represents the conversation of a horse and an eagle; and these fragments mount back to the Accadian epoch. The Hindu fables, again, cannot be connected with Africa, and when we compare the collection of the Panchatantra with the fables of Æsop, it becomes probable that the Aryans were acquainted with this class of fictitious composition before the age of their separation. All over the world indeed, we find animals endowed with the language and

[1] See the specimen given by Mitterrutzner: "Die Sprache der Bari in Central-Afrika," p. 10.

[2] "Second Report concerning Bushman Researches" (1875), p. 6.

powers of men. Thus among the Polynesian myths collected by Mr. Gill, we are told of a shark that speaks and acts like a human being,[1] and an Australian legend reported by Mr. Ridley ascribes human speech and action to the pelican and the musk-duck.[2] The fable is an integral part of mythology; it is not until we reach the literary age that it ceases to be the spontaneous utterance of a childlike people and becomes the vehicle of a moral or a satire. As we shall see, there is no necessary connection between totemism and the fable.

Allegory and parable are the products of an era of cultivation. We have left the childhood of mankind behind us; we have passed to the time of conscious reflection and religious or moral propagandism. Artificiality is the essential characteristic of both. The parable is the germ of the romance. It draws an analogy between some truth the speaker would press home and a story framed from the occurrences of simple everyday life. The allegory is more elaborate. Its language is consciously ambiguous; its form is longer than that of the parable; it describes, not some simple event of ordinary life, but a strange and often bizarre history, filled it may be with the marvellous and the supernatural. Quite different is the deliberate fiction, such as the monk of the Middle Ages palmed off as bygone history. In the silence of his cell he could not distinguish between the real and the imaginable, and tissues of fiction like the history of the Trojan kings of Britain or the Iberian monarchs of Spain deceived their

[1] "Myths and Songs from the South Pacific," p. 92.
[2] "Kámilaróí," &c., pp. 143, 144.

inventor as much as they deceived his readers.[1] But though we may acquit the monkish chroniclers of moral guilt in thus forging fictitious history, it is of the utmost importance not to confound such curious specimens of morbid imagination with the early myths of young and healthy humanity.

Mythology is so closely bound up with religion that the comparative philologist cannot escape from the study of those religions and religious systems which have their root in the mythopœic age. Side by side with the science of mythology, stands the new science of religion or Dogmatology. Like the science of mythology, the science of religion is comparative, comparing the history and dogmas of the various religions of the world; and like the science of mythology, too, it has to turn for help at almost every step to comparative philology. Roughly speaking the religions of man may be divided into two broad classes; those that have been organized into a system, and those that have not. Those of the second class rest upon mythology, and the same key that has to be applied to mythology has also to be applied to them; those of the first class are supported upon sacred books, written in sacred and extinct languages, the meaning of which has to be recovered by comparative philology, though they, too, have for the most part a background of myth. Comparative mythology and the science of religion, therefore, are the twin offspring of the science of language. Language is a record of the past thoughts and yearnings of society, and the strongest of these yearnings, the deepest

[1] An account of many of these will be found in Buckle: "History of Civilization," i. ch. vi.

of these thoughts, are those which have to do with religion. As we restore the old sense and life of a myth by discovering the first meaning and import of its key words, so we can trace step by step the phases through which a creed has passed, and determine the germs out of which its dogmas have developed, by ascertaining the exact significance of the language wherein they were expressed. The application of the scientific method has shown that the Rig-Veda knows nothing of a priestly hierarchy, of a system of caste, of the burning of widows, and that the introduction of all these things was the slow work of later centuries. We have only to examine the language in which a dogma of the Christian Church has been embodied at different periods, and ascertain its exact meaning to those who employed it, to see how strangely it has changed and shifted, how continuous has been that "Development of Christian Doctrine," which Dr. Newman has described. What misery and hatred would have been avoided had men known how vague and shifting were the words and phrases over which they fought, how coloured by the ages through which they passed and the knowledge of the men who used them! It is with this outward shell, this external form of religion that its scientific student is concerned; with "the letter that killeth," not with "the spirit that giveth life." Questions of orthodoxy and heresy, of the truth or falsity of particular religions, must be handed over to the theologian. That intuition of the Divine, whether we call it the religious instinct, the sense of the Infinite, or the grace of God, which is the soul, the life and the preserver of all real religion, nay, of all real mythology also, lies outside the sphere of the

science of religion. The object of the latter is to compare and classify the faiths of the human race, to trace their growth collectively and severally, to analyse the changes they have undergone and the shapes they have assumed, and to restore the first sense and meaning to their sacred books. The work is a vast one, and it will need the labour of many minds and many years before it can be completed. But already something has been done. We are even now beginning to see that there is no faith, however degraded, which does not contain some ray of light and truth; no creed, however pure and exalted, which has not passed through many phases of existence, and gathered to itself additions of which it may well be rid. A religion, even if revealed, must be communicated to man, and handed down through human channels; its outward form, therefore, will be shaped and moulded by the changing years, and be subject to all the conditions of growth and decay. It will be conformed not only to the necessities of time and place, but also to the character and instincts of the races by whom it is professed. The Christianity of the Negro is not, and cannot be, the same as the Christianity of the Englishman, so far as its outward form and fashion is concerned, and the various shapes assumed by Christianity in different ages and in different countries, are not more remarkable, more seemingly incongruous, than the various shapes similarly assumed by Buddhism. All organized religions have a history, and that history is written in the languages they have used.

But an organized religion, like an organized State, is a late product, an outward sign and symbol of advanced

civilization and literary culture. It presupposes long ages of previous preparation, beliefs and prejudices, ideas and imaginings, which are worked upon by the founder or the founders of the new creed. Buddhism was but a reaction against the tyranny of the Brahmanic priesthood, whose first principles and philosophy it accepted, and the dualism of the Zend Avesta can be traced back to the conceptions which lie latent in the Rig-Veda of India. What Buddhism is to Brahmanism, Christianity may in one sense be said to be to Judaism, and just as the tenets of early Christianity have been ascribed to Essenes, so Mr. Thomas would now ascribe the tenets of early Buddhism to Jains. Nor does the parallel end here: Buddhism started with being an Aryan religion, and has ended with being extirpated from its birthplace and becoming the faith of non-Aryan races, just as Jewish Christianity was merged in Gentile Christianity and driven from its first home in Palestine. The great council which settled the creed of Buddhism was convened by A'soka, the first royal convert, about three centuries after the Buddha's death, as the Council of Nikæa, which drew up the Nicene Creed, was summoned by Constantine in A.D. 325. The sublime morality and simple life and teaching of the first Buddhist missionaries are not more widely separated from the elaborate ritual, the worship of saints and relics, the praying-machines and rosaries, the priestly hierarchy, and the Lama-Pope of the modern faith, than are the precepts and history of the New Testament from the constitution and practices of the Latin Church. And as Zoroastrianism was a protest against the Polytheism of the Veda, so did Mahommedanism pro-

fess to be a protest against the Christian idolatry of the sixth century. Indeed, there is much in common between these two great Puritan religions of the Aryan and Semitic world.

The variety and many-sidedness of the religions which are not yet organized might seem to defy classification and record. Even here, however, it is possible to bring order and arrangement into the apparent chaos, and to sketch in broad outline the development of religion and the religious consciousness. Man shares with the animals the instinct of imitation and conservatism; and in the most developed forms of faith we may often detect survivals which go back to a remote past. Some phase of religious thought through which a people may have passed millenniums ago, may be fossilized in words and phrases, the key to the original meaning of which is furnished by comparative philology. Few of us when we speak of *Deity* think that the word bears witness to a time when our forefathers looked up to the "bright heaven" as the source and giver of all good things, and the Welsh *crefydd*, "religion," the Irish *craibhdhigh*, "people who mortify the flesh," when compared with *'sram*, "to chastise oneself," and *'srânta*, "asceticism," point to the practice of self-inflicted penance.[1]

The existence in any religion of beliefs, practices, or customs which are no longer in harmony with the religion itself is as clear a proof of their having preceded that religion as are the names we give to the days of the week of the gods worshipped by our heathen ancestors. If we find ancestor-worship or fetishism prevailing among a

[1] Rhŷs: "Lectures on Welsh Philology," pp. 14, 15 (1st edition).

people, we may assume that ancestor-worship or fetishism are stages of religious thought in the past history of the people. Now, a comparison of the various religious beliefs and customs of mankind shows that there are no less than six forms in which the religious consciousness of man has endeavoured to embody itself before the rise of organized religions, or the conception of the Unity of God. These are ancestor-worship, fetishism, totemism, shamanism, henotheism, and polytheism. If these six forms can be proved to have been successive stages of growth, or if a relation can be pointed out between them, we shall have gone far towards sketching the history and development of unrevealed religion. But as yet our materials are too scanty and imperfect for such a work, and though attempts have been made from time to time to accomplish it, they are all more or less open to criticism. The theory that fetishism is the first in the chain of development started by De Brosses in the last century has been rudely shaken by Prof. Max Müller,[1] and can never again be maintained in its old form. The fetish, so called from the Portuguese *feitiço*, "an amulet," the Latin *factitius*, implies a belief in the divine or the superhuman, and hence to regard fetishism as the starting-point of religion is like making the husk of a seed, and not the kernel within, the primal germ of a tree. Nevertheless the nature of fetishism, coupled with the fact that its presence always marks a degraded condition of mind and religion, tends to show that it belongs to the childhood of religious thought. The Christianity of modern Spain may be disfigured by fetish-worship, but that is because the

[1] "Hibbert Lectures," ii. (1878).

religious and mental state of the fetish-worshippers represents that of the first men.

Ancestor-worship would seem to be the first form in which the religious instinct struggled to clothe itself. The State came before the individual, the tribe before the State, and the family before the tribe. The individual had no existence as such apart from the family or clan to which he belonged. His religion in its outward form was made up of rites and ceremonies which could only be performed collectively, and it is a curious proof of the deep-rootedness and antiquity of this belief that it lingered on into the historic age of Greece and Rome. Each member of a family, like the bee in a hive, was but part of a single whole, and in its relations to every one and everything outside the family, that whole alone could originate and act. But the family consisted of the dead as well as of the living. The savage could, and can, draw no clear distinction between his waking realities and the images of his dreams. Like children, the first men wondered whether they slept or wakened, and the unpractised memory could give them no reply. The figures of dream-land were to it as real and vivid as the events of the day before. And in his dreams the dead appeared to the sleeper once more living and clothed in corporeal form. There was but one explanation of the fact which could suggest itself to him. Man had two lives, one in the world of lights and shadows, the other in a world which we should name the spiritual.

The conception of this reflected life once obtained, it was not difficult to find traces of it even in the world of objects itself. The voluntary or involuntary fasts of the

savage produced visions indistinguishable from the dreams of night, while the shadows thrown by the things about him were so many immaterial second "selfs." The conception of a continued, superhuman life enjoyed by dead ancestors combined with these to create the conception of spirits or ghosts; and with this new conception the religious instinct took a new departure. The dream or waking vision had portrayed the disembodied ancestor sometimes as a friend, sometimes as an enemy, sometimes bringing benefit and blessing, sometimes disease and pain; and the human passions thus reflected in him were now transferred to the new conception of ghost or spirit. But just as every object has its shadow, so, too, the spirit may take up its abode in animals and material things. The Hurons of North America believe that the souls of the departed turn into turtle-doves; the Zulus see the spirits of their ancestors in certain green and brown harmless snakes, and accordingly offer them sacrifices. The worship of ancestors passes by insensible degrees into the worship of animals and trees. And preeminently among animals, the serpent, the most subtle of all the beasts of the field, attracted the fear and the adoration of man. The crawling serpent, the solitary occupant of tombs and empty houses, seemed the natural habitation the dead had chosen for himself, and the Pythagorean saying that the human marrow after death is changed into a snake, is but a later form of the old idea. The terror inspired by this venomous foe of man was another potent cause that brought about the wide prevalence of serpent-worship.

For necessity is the mother not of invention merely,

but also of religious ceremonies. We have already seen how the character of a mythology is the work of the daily needs of man; and it was the same daily needs that were the source of his earliest adoration and prayer. It was for the sake of earthly good and success, or to avert a threatened evil, that his offerings were spread to the manes of the dead and the spirits that moved about him. The angry ghost he had seen in his dreams, or whose gnawings he felt in his aching tooth, had to be propitiated and appeased. "The Redskin," says Carver,[1] "lives in continual apprehension of the unkind attacks of spirits, and to avert them has recourse to charms, to the fantastic ceremonies of his priest, or the powerful influence of his manitous. Fear has of course a greater share in his devotions than gratitude; and he pays more attention to deprecating the wrath of the evil, than securing the favour of the good beings." Fear of pain and the desire of food were the two main motives that drove men to the practice of religion, and the sense of their dependence on a power beyond themselves.

Out of ancestor-worship would grow fetishism as soon as the conception of an indwelling spirit in material objects had been formed and the idea of worship been associated with the desire of satisfying man's daily wants, or warding off sickness and other ills. Fetishism is a worship of stocks and stones; the inanimate objects which minister to human needs are invested with a transient divinity, and adoration is paid to them so long as they excite terror or satisfy desire. The spiritual is localized in the bow, the spear, or the fruit-tree; but it is

[1] "Travels," p. 388.

localized only so long as these objects are of use to the worshipper. An amulet loses all its virtue as soon as the owner believes that it will no longer shield him from harm; the Indians of Columbia beat their idols when any one is ill, "and the first which loses a tooth or claw is supposed to be the culprit."[1] Like the Palladium of Troy, the Βαιτυλοί or Beth-els of the Semite, or the Ephesian "stone which fell down from heaven," the wand of Hermes, the arrows of Apollo, and the other symbols of the Greek divinities are but the survivals of a primitive fetishism.

In Shamanism, so called from the Shaman or Siberian sorcerer, who is himself but a transformed *'srâmana*, or Buddhist missionary priest, we rise to a higher conception of religion. All the objects and forces of nature have alike their indwelling spirit, who is no longer the transient creation of self-interested superstition, but represents the permanent substance, "the thing-in-itself" of German philosophers, believed to reside in things and produce their phænomena. It is no longer in the power of man to make and destroy his deity; the innumerable spirits by whom he is surrounded have a world of their own, and can only be approached by a special class of persons who stand between them and the rest of mankind. But these spirits are, after all, the mere reflections of the objects and forces to which they belong, and like the objects and forces of nature are either beneficial or harmful to man. The work, therefore, of the Shaman, or Angekok, as he is termed in Greenland, is to neutralize the action of the

[1] Dunn: "Oregon," p. 125, quoted by Lubbock: "On the Origin of Civilization" (1st edition), p. 246.

evil spirits and to compel the action of the good spirits by various incantations and magic ceremonies. Of course the same spirit may be at different times mischievous and beneficial, like the object or phænomenon it represents, and the Shaman can not only avert evil from one man, but bring it down upon the head of another. Shamanism is the form specially assumed by the religious instinct among the tribes of the Ural-Altaic family, and even the cultivated Accadian of ancient Chaldea continued to be under its influence long after the development of a considerable civilization.

Quite distinct from shamanism is totemism, which bears the same relation to the Indians of North America that shamanism does to the nations of the Ural-Altaic stock. The totem, which is generally an animal, is the symbol or badge of a tribe, and, consequently, the object of worship to every member of that tribe. Totemism is therefore tribal; it is defined by Sir John Lubbock as "the deification of classes," which correspond to the tribes they symbolize and protect. The same sort of rationalistic explanation has been given of totemism as was given of mythology in the last century. It has been said that the totem was originally the name of some animal applied to an individual from his supposed resemblance to it; the name then became the surname of his descendants, while the animal it denoted was invested with a sacred character. But such an explanation forgets that the individual does not precede but follow the family and the tribe; it is only at a later time that the individual founds a family and hands on his name to those that come after him. The eponymous heroes of antiquity are

the creations of a systematizing mythology. It is simpler to trace totemism to that embodiment of the dead ancestor's spirit in some living animal of which we spoke above. Here, perhaps, we may see the germ out of which it grew. There is, however, a close connection between totemism and mythology. The tribal age is also the epithetic age of language, the age when epithets are coined and handed down to future generations. It was only needful for the objects of tribal worship to be compared to animals for the animals first to be substituted for them, and then to be worshipped in their stead. Dr. Brinton[1] tells us of Michabo, "the Great Hare," from whom the various branches of the Algonkin family, from Virginia and Delaware to the Ottawas of the North, traced their descent. But Michabo was really a solar hero, like Quetzalcoatl of Mexico or Huayna Capac of Peru. His home was on the marge of the east, whence he sent forth the lights of heaven on their daily journey, and his identification with the hare was simply due to the ambiguity of the word *wabos*, which enters into the composition of his name, and properly means "white," and thence on the one side "morning," "east," "day" and "light," and on the other side "the hare." But the adoration which was intended for "the great light" of sun and day would never have been extended to "the Great Hare," had not the way been prepared by an earlier cult of animals and the old belief in their embodying the souls of the dead.

It is, however, with polytheism, and what Professor Max Müller has christened henotheism, that mythology stands in the most intimate relation. Polytheism

1 "Myths of the New World," pp. 161, *sq.*

and henotheism are but two phases of the same form of religious faith, the two sides, as it were, of the same prism. It matters little whether a multitude of gods are worshipped together, or whether the worshipper addresses but one of them at the time, making him for the moment the supreme and single object of his religious reverence. In either case we have a plurality of deities, confessed explicitly in polytheism, implied in henotheism. And these deities are necessarily suggested by nature: the variety of nature overpowers in an infantile state of society the unity for which the mind of man is ever yearning. Gradually, however, the attributes applied to the objects and powers of nature take the place of the latter; the sun becomes Apollo, the storm Arês. Deities are multiplied with the multiplication of the epithets which the mythopœic age changes into divinities and demi-gods, and side by side with a developed mythology goes a developed pantheon. The polytheism which the infinite variety of nature made inevitable continues long after the nature-worship that underlay it has grown faint and forgotten. A time at last comes when even abstract names have to submit to the common process; temples are raised to Terror and Fear, to Love and Reverence; and the doom of the old polytheism of nature is at hand. When once the spirit of divinity has been breathed into abstractions of the human mind, it cannot be long before their essential unity is recognized, and they are all summed up under the one higher abstraction of monotheism.

But the gods have first been clothed with human form. The worship of man, with all his crimes and meanness,

by his brother-man, is impossible so long as the element of divinity is not abstracted from the original object of worship. But as soon as polytheism makes it possible to dissociate the god from the image and symbol that enshrine or represent him, there arises the cult of man himself, the apex and crown of created nature. The human attributes with which the gods have been endowed assume concrete shape; Vishnu is provided with arms and legs, Merodach with the form of an armed warrior. At first idealized humanity is supra-human humanity as displayed in Titanic strength or supernatural wisdom; it is only in the hands of the Greek artist that it becomes idealized human beauty. As the doctrine of force is older than the doctrine of art, the ascription of the attributes of strength, of swiftness or of wisdom to the divine is older than the ascription of beauty. Philip of Krotona was deified by the Greeks of Egesta because of his beauty;[1] elsewhere it has been other qualities that have gained for men apotheosis or saintship.

In bringing the gods down to earth in the likeness of men it was inevitable that the men should in turn be raised up to heaven in the likeness of gods. Anthropomorphic polytheism is almost invariably accompanied by the deification of men. The relics of ancestor-worship that still survived would at first cause the deification to take place after death, and it is curious to find in the practice of the Roman Church the same echo of the influence once exercised by the worship of the *Manes* as in the superstition that forbids us to "speak evil of the dead." But in course of time the apotheosis took place

[1] Ht. v. 47.

during a man's life. As might have been expected, this first occurs in the case of the Chaldean and Egyptian monarchs who lived apart from the mass of their subjects, and were to them like invisible and beneficent gods. The apotheosis of the Roman Emperors was due to a variety of mixed causes, and rested primarily on the fact that each was supposed to represent the unity and omnipotence of the State. As Mr. Lyall has pointed out in an interesting article, we can still watch the process of deification among certain of our Indian fellow-subjects.[1] Not long ago, for instance, the Bunjâras turned General Nicholson into a new god, to be added to the many existing soldier-divinities at whose tombs sacrifices and worship were regularly offered. It is clear that deification cannot be without influence upon the mythology in the midst of which it is found. Deified heroes and their deeds will become blended with the heroes and deeds of myth; and the natural course of a myth may thus be interrupted and turned aside. The same disturbing consequences that accompany the localization of an ancient myth, and its attachment to a figure of history, will accompany its intermixture with the name and adventures of a deified English general or a canonized Christian saint.

Like the Zeus of its poets, polytheism gives birth to its own destroyer. The further it is removed from its original basis in outward nature, the more spiritualized and reflective it becomes, the more does it tend to pantheism on the one side and monotheism on the other.

[1] "Religion of an Indian Province," in the "Fortnightly Review," xi. pp. 121-40 (1872).

Its deities cease to be more than mere abstractions, and these abstractions are soon resolved into a higher unity. Already in the days of the Accadian monarchy the religious hymns of Chaldea speak of "the One God,"[1] and even before them the Egyptian priests had been busy in proving that the manifold gods of the people were but manifestations of one and the same Divine Essence. Xenophanes asserts that "God is one, greatest among gods and men, in no wise like unto men in form or thought," and the language of Æschylus is full of the same faith.[2] With Aristotle the Divine becomes *νόησις νοήσεως*, thought thinking upon itself, that Impersonal Reason which Averrhoes essayed to harmonize with the clearly-cut, sharply-defined God of Mahommed. As the generations pass, our conception of the Godhead becomes more abstract, more worthy; and though we may not acquiesce in the definition of the modern writer who declares it to be "that stream of destiny whereby things fulfil the law of their being," we may yet learn from the science of religion and the study of comparative philology what strangely different meanings men have read into the terms they use to express the centre of their highest hope and faith, and how, stage by stage, their thoughts "have widened with the process of the suns."

[1] W. A. I. iv. 16, 1, 7, 8.

[2] Compare "Prom. Vinct." 49, 50; "Ag." 160-78; "Suppl." 574.

CHAPTER X.

THE ORIGIN OF LANGUAGE, AND THE RELATION OF THE SCIENCE OF LANGUAGE TO ETHNOLOGY, LOGIC, AND EDUCATION.

"Der Mensch ist nur Mensch durch Sprache; um aber die Sprache zu erfinden, müsste er schon Mensch sein."—*W. von Humboldt.*

"One might be tempted to call language a kind of Picture of the Universe, where the words are as the figures and images of all particulars."—*Harris* ("Hermes," p. 330).

"Es ist ein Factum der Monumente, dass die Sprachen im ungebildeten Zustande der Völker, die sie gesprochen, höchst ausgebildet geworden sind, dass der Verstand sich sinnvoll entwickelnd ausführlich in diesen theoretischen Boden geworfen hatte."—*Hegel.*

"Das Leben eines Volks bringt eine Frucht zur Reife; denn seine Thätigkeit geht dahin, sein Princip zu vollführen."—*Hegel.*

To understand a thing aright we must know its origin and its history. Thanks to the comparative method of science, we can now trace with tolerable fulness the history and life of language; will the same method enable us to discover its origin also? Can we follow language up to its first source, and set before us the processes whereby man acquired the power of articulate speech? No single science, indeed, can reveal the origin of the facts and phænomena upon which it is based; these it has to take for granted and content itself with discovering the relations they bear one to another, the laws which govern

them, the transformations which they undergo. But the single sciences are subordinated one to the other, and it is the province of one to explain the origin of the facts from which another has to start. Comparative philology may be powerless of itself to dispel the mystery which envelops the first beginnings of articulate speech; with the aid of the master-science of anthropology, however, the mystery ceases to be insoluble, and the origin and exercise of the faculty of speech become as little mysterious as the origin and exercise of the other faculties of civilized man.

We have already reviewed in the first chapter the various attempts that have been made in ancient and modern times to solve the riddle of language, and have seen how each fresh attempt has advanced the solution in a greater or less degree. False explanations have been gradually eliminated, approximately true ones have been corrected and defined. Here, as elsewhere, no single key will suffice to turn the lock; language is the product not of one cause, but of a combination of several. Grammar has grown out of gesture and gesticulation, words out of the imitation of natural sounds and the inarticulate cries uttered by men engaged in a common work, or else moved by common emotions of pleasure and pain. Language, in fact, is a social creation; we may term it if we like, a human invention, but we must remember that it is no deliberate invention of an individual genius, but the unconscious invention of a whole community. It is, as Professor Whitney has observed, as much an institution as is a body of unwritten laws; and like these it has been called forth by the needs of developing society.

Nowhere has the old proverb that "Necessity is the mother of invention" received a better illustration than in the history of speech; it was to satisfy the wants of daily life that the faculty of speech was first exercised, and the cries which were as natural to man as songs to birds, first adapted to the expression of articulate language. The clicks of the Bushman still survive to show us how the utterances of speechless man could be made to embody and convey thought. And the same process that slowly transformed the beast-like cries of our earliest ancestors into articulate sounds, slowly transformed the vague and embryonic thought enshrined in them into grammatical sentences. Like the beehive community to which modern research refers the first beginnings of society, the first essays at language were undifferentiated units, out of which the various parts of the sentence were eventually to come. The whole precedes its parts historically, if not logically, and it was only by setting sentence-word against sentence-word that the relations of grammar were determined, and means found in the existing material of speech for expressing them.

But in speaking of the origin of language we must be careful to distinguish between the origin of the faculty of speech and the origin of the exercise of it. So far as the origin of the exercise of it is concerned, it is not more difficult to explain than the origin of the exercise of our faculty of locomotion. We walk because we have the muscular power to do so, and this power must be exercised if we would satisfy our healthy desire to move the limbs and would supply the needs of our daily existence. The question as to origin of the faculty of speech falls

under the province of biology, and M. Broca speaking in the name of biology has endeavoured to answer it.[1] Whether the endeavour has been successful must be decided by future observation and experiment.

According to his researches the faculty of speech is localized in "a very circumscribed portion of the [two] cerebral hemispheres, and more especially of the left." These hemispheres, into which the brain or cerebrum is divided, are distinguished on their under side into three lobes—the posterior, overlapping the cerebellum, on which the cerebrum partly rests, the middle, and the anterior, the two latter being separated from one another by the Sylvian fissure. Below this fissure is a triangular protuberance called the island of Reil, marked by small, short convolutions or *gyri operti*, which are among the first to be developed, and are surrounded by a large convolution forming the lips of the Sylvian fissure. It is on the upper edge of the Sylvian fissure, and opposite the island of Reil, that M. Broca places the seat of the faculty of speech in the posterior half of the third frontal convolutions of the right or left hemispheres. Aphasia, he finds, is invariably accompanied by lesion or disease of this portion of the brain. The lesion occurs in the left hemisphere in about nineteen out of twenty cases, and though the faculty of speech is sometimes not affected even by a serious lesion of the right hemisphere, it "has

[1] See the "Bulletins de la Société anatomique," 1861, 63; "Bulletins de la Société de Chirurgie," 1864; "Bulletins de la Société d'Anthropologie de Paris," 1861, 63, 65, 66; Proust: "Altérations de la Parole," in the "Bulletins de la Société d'Anthropologie de Paris," 1873; and "De l'Aphasie," in the "Archives générales de Médecine," 1872.

never been known to survive in the case of those whose autopsy has disclosed a deep lesion of the two convolutions" of the right and left hemispheres.

The greater importance of an injury to the left hemisphere seems due to the fact that the convolutions of this hemisphere develop at an earlier period than those of the right. To the same fact may also be ascribed the tendency of most persons from childhood to use the right rather than the left hand, the movements of the right-hand members of the body depending on the left hemisphere. Left-handedness is the exception, like the early development of the convolutions of the right hemisphere of the brain. So, too, the localization of the faculty of speech in the right hemisphere is equally the exception, language which is learnt in infancy naturally calling into exercise the most developed of the two portions of the brain. But like the left hand, the right hemisphere may in time acquire a certain control over language, and in most cases, accordingly, lesion of the left hemisphere produces merely aphasia, that is, inability to use words rightly, not inability to understand what is said by another. It is possible that the fluency and readiness of expression which distinguish certain speakers result from a simultaneous development of the frontal convolutions in both hemispheres of the brain.

The faculty of speech, whether exercised or unexercised, is the one mark of distinction between man and the brute. All other supposed marks of difference—physiological, intellectual, and moral—have successively disappeared under the microscope of modern science. But the prerogative of language still remains, and with it the

possession of conceptual thought and continuous reasoning. Though numberless instances may be brought forward which prove the possession of rudimentary reason and intelligence by the brute beasts, though instinct itself is but a kind of hereditary reason, thought in the true sense of the word is impossible without language of some kind. The power of forming concepts, of summing up generalizations under single heads which form the starting points of fresh generalizations, depends upon our power of expressing them in short-hand notes or symbols like the words of articulate speech or the conventional signs of the mathematician. Language, it is true, is the embodiment of thought, but it is equally true that without language there can be no thought. The Tasmanian, with his poorly organized language, had no general terms; the New Caledonian is unable to understand such primary ideas as "to-morrow" and "yesterday," and the speechless child has not yet reached the level of intelligence displayed by the dog or the elephant.

But the child is capable of acquiring language, which the dog and the elephant are not, and this capability is sufficient to mark him off as a member of the human family. The faculty of speech may lie dormant and unexercised, but wherever it exists we have man. The deaf-mute, whose deafness has prevented him from learning to speak, or the mute whose diseased vocal organs refuse to utter the sounds he desires to form, are alike men, able to share in the possession of language as soon as the physical difficulties which stand in their way are removed. Even the idiot or the patient suffering from aphasia cannot be compared with the parrot and other

talking birds, since his misuse of thought and speech can be traced back to a diseased condition of the brain, while the chattering of the parrot remains a mere mimicry to which neither sense nor meaning is attached.

We must further remember that language does not necessarily depend on the production of vocal sounds. We can converse by means of signs and gestures as well as of modulations of the voice. Wherever and in whatever way a meaning may be conveyed to another, we have language. What the precise symbols are whereby the meaning is conveyed is a secondary matter; the important fact is whether the meaning is so conveyed at all. Vocal language is more perfect than any other kind of language; the sounds we utter are more infinitely various than the signs we could make with our hands, and therefore better adapted to symbolize the manifold ideas of the growing intelligence; but the experience of travellers shows that we could get on well enough, so far as the necessaries of life are concerned, with a language of signs. Such a language would sufficiently express the needs and thoughts of a savage or barbarous community, however inadequate it might be to express those of a civilized one. The language of signs used by the North American traders in their intercourse with the natives quite sufficed for all the purposes for which it was devised. Thus James[1] gives a list of 104 signs employed by the Indians in the place of words, and adds another list published by Dunbar, which differs from his own in several respects. *Darkness*, for instance, was indicated

[1] Long's "Expedition to the Rocky Mountains," vol. i. Appendix B, pp. 271-88 (1823).

by extending the hands horizontally forwards and back upwards, and passing one over the other so as to touch it once or twice; a *man* by a finger held up vertically; *truth* by pointing with the forefinger from the mouth in a line curving a little upward, the other fingers being carefully closed; *good* by holding the hand horizontally and describing a horizontal curve outwards with the arm; *running* by first doubling the arm upon itself, and then throwing the elbow backwards and forwards; *no* and *not* by waving the hand outwards with the thumb pointed upward. In Dunbar's list, on the contrary, the indication of the negative consists in holding the hand before the face, with the palm outward, and vibrating it to and fro; while *man* is denoted in a somewhat complicated way by extending the forefinger, the rest of the hand being shut, and drawing a line with it from the pit of the stomach down as far as can be conveniently reached.

A similar language of signs was employed in the monasteries where the rule of silence was strictly enjoined. Thus *giving* was denoted by opening the hand, *taking* by shutting it. One forefinger laid across the other represented a *brother; blindness* was indicated by placing the hands over the eyes, *shame* by placing them over the eyes obliquely, *day* and *daylight* by forming a ring with the thumb and finger and holding them before the face.[1] Similarly the North American Indians repre-

[1] Leibnitz: "Collectanea Etymologica," ch. 9 (1717). Compare Tylor: "Early History of Mankind and the Development of Civilization," ch. iii. iv. v., and Kleinpaul: "Zur Theorie der Geberdensprache," in Steinthal's "Völkerpsychologie," &c., vi. pp. 352-75.

sented the sun by forming a circle with the thumb and finger and holding them up towards the sun's track, the time of day being marked by extending the hand in an eastward direction and then raising it gradually. Had the hands not been wanted for other purposes, it is possible that the mouth might never have been used to communicate ideas.

The possibility of a language of signs suggests the question whether the possession of speech is so distinguishing a characteristic of man as has just been laid down. That animals can communicate with one another by means of signs and gestures admits of no doubt, however limited and imperfect such communication may be. Nay more, in many cases they can communicate with one another by the help of cries, and the six sounds uttered by the *cebus azaræ* of Paraguay excite definitely-corresponding emotions in other members of the same species. The barking of the dog and the mewing of the cat are said to be attempts to imitate the human voice, and it is often not difficult to guess the feeling or the desire implied by either. When we remember the inarticulate clicks which still form part of the Bushman's language, it would seem as if no line of division could be drawn between man and beast even when language itself is made the test.

But the difficulty is only the old one that meets us wherever we try to draw a hard and fast line of division between two groups which yet belong to very definite and distinct types. Such germs of language as the beasts possess remain but rudimentary; man alone has developed them into the wonderful outgrowth of speech.

Were the beast to do the same, he would become man. The difference between the beginnings of language which we detect in animals and the first attempts at speech of early man is but a difference of degree; but differences of degree become in time differences of kind. The speechless child cannot be distinguished from the unconscious younglings of the herd; but whereas the youngling of the herd can become at best the owner of a faint intelligence, the child may develop into a Cæsar or a Newton.

Accordingly the followers of Darwin and Haeckel, with whom accumulated differences of degree, aided by natural and sexual selection, become eventually differences of kind, hold that language presents no greater obstacle to their theory than do the details of the physical structure. Just as the rudiments of conscience and will exist in animals, so also do the rudiments of speech. Physiologically there is a greater chasm between the monkey and the chimpanzee than there is between the chimpanzee and man, and the moral and intellectual interval that divides "the supreme Caucasian mind" from the Tasmanian or the smileless Veddah, seems at least as great as that which divides the latter from the anthropoid apes. Only the fact remains that no anthropoid ape has ever raised himself to the level of articulate-speaking man.

Between the ape and man, therefore, the evolutionist has inserted his *homo alalus*, "speechless man," whose relics may yet be discovered in Central Africa, or in the submerged continent of the Indian Ocean.[1] Wherever

[1] See Haeckel: "History of Creation," Engl. tr. by Ray Lan-

the conditions were favourable, *homo alalus* developed into *homo primigenius*, whose first records are the unworked flints of countless ages ago. Where the conditions were unfavourable, there was retrogression instead of progress, and *homo alalus* became the progenitor of the gorilla, the chimpanzee, the gibbon, and the orang-otang. Such is the theory which post-tertiary geology can alone verify or confute.

Its adherents, however, can appeal with considerable justice to the experiences of childhood. The race, we may presume, must have passed through the same stages of mental and moral growth as the individual now compresses into a few years. The unconsciousness of the child reflects the early unconsciousness of mankind. The same labour the child has now to undergo in learning its mother-tongue mankind had once to undergo in learning speech. With this difference, however, that primitive man was a grown child who painfully elaborated a language for himself, whereas the individual child has but to acquire a language already formed, and with it the accumulated experiences and ideas of former generations. What the European, with hereditary instincts and aptitudes, now learns in two or three years, is the slow and laborious creation of many minds and many centuries. The child's memory is exercised rather than his reason or his imagination.

Nevertheless, we may gain many important hints and

kester, vol. ii. pp. 293-333 (1876). Haeckel makes *homo primigenius* precede *homo alalus* or *pithecanthropus*, who originates the still speechless woolly-haired and straight-haired men, and is himself derived from the catarrhine or flat-nosed quadrumana.

suggestions as regards the origin of language by watching the first attempts made by the child to speak. Like primitive man, he is moved partly by the innate love of imitation, partly by the necessity of making his wants known, partly, too, by the healthy desire to exercise his lungs. As long ago as the reign of Psammitichus, an endeavour was made to discover the origin of speech by observing the earliest utterances of children; and the Egyptian king believed that he had found in Phrygian the oldest language of the world, since the first utterance of the two infants he had brought up in speechless solitude was *bekos*, the Phrygian term for "bread."[1] But the number of scientifically trained observers who have carefully noted the development of a child's consciousness and power of speech is extremely small, and we are consequently much in want of accurate phonological and psychological facts bearing upon the subject. M. Taine gives the following account of the observations he made in the case of one of his own children.[2] This was a little girl, of whom he notes that "the progress of the vocal organ goes on just like that of the limbs; the child learns to emit such or such a sound as it learns to turn its head or its eyes—that is to say, by gropings and repeated attempts." "At about three and a half months, in the country, she was placed on a carpet in the garden; lying there on her back or stomach for hours together, she kept moving about her four limbs, and uttering a number of

[1] Hdt. ii. 2. *Bekós* has the same root as our *bake*, the Greek φώγω, φοξός, the Sanskrit *bhaj*. If the story has a basis of fact, the sound uttered by the unfortunate children may be considered an attempt to imitate the cry of goats.

[2] "Revue Philosophique," i. (January 3, 1876).

cries and different exclamations, but vowels only, no consonants; this continued for several months. By degrees the consonants were added to the vowels, and the exclamations became more and more articulate. It all ended in a sort of very distinct twittering, which would last a quarter of an hour at a time, and be repeated ten times a day." She took delight in this twitter "like a bird," but the sounds, whether vowels or consonants, were at first very vague, and difficult to catch. Her first clearly articulated sound was *mn*, made spontaneously by blowing through the lips. The discovery amused her greatly, and the sound was accordingly repeated over and over again. The next sound she formed was *kraaau*, a deep guttural made in the throat, like the gutturals so characteristic of Eskimaux; then came *papapapa*. These sounds, which were at the outset her own inventions, were fixed in her memory by being repeated by others, and then imitated many times by herself. As yet, however, she attached no meaning to any of the words she uttered, though, like the dog or the horse, she already understood two or three of the words she heard from the lips of those about her. Thus from the eleventh month onward she turned to her mother at the words "where is mamma?" which, be it observed, is a polysyllabic sentence. But a month later the great step was made which divides articulate-speaking man from the brutes. The word *bébé* had now come to signify for her a picture, or rather "something variegated in a shining frame." During the next six weeks her progress was rapid, and she made use of nine words, each with a distinct though wide and general meaning. These were *papa*, *mama*, *tété*, "nurse;" *oua-oua*

"dog;" *koko*, "chicken;" *dada*, "horse" or "carriage;" *mia*, "puss;" *kaka*, and *tem*. Besides these *bébé* also continued to be employed, though its meaning was enlarged so as to signify "whatever wets." It will be noticed that most of these words are reduplications, that only one of them is monosyllabic, and that three at least are imitations of natural sounds. They were used, too, as general terms, not in the sense of a single individual only, but of all other individuals which seemed to the child to resemble one another. M. Taine observed that the guttural cry of the chicken, *koko*, was imitated with greater exactness than was possible for grown-up persons. The word *tem* was probably a natural vocal gesture, though it might have been a rude representation of *tiens*. In any case it was used in the general sense of "give," "take," "look;" in fact, it signified a desire to attract attention. It had been first used for a fortnight as a mere vocal toy, without any meaning being attached to it, and after a time was left off, no other word taking its place. Meanwhile, by the seventeenth month, several new words had been learned, including *hamm*, which the child employed to signify "eat" or "I want to eat." This word was her own invention, the merely natural vocal gesture of a person snapping at something. But the guttural and labial force with which it was pronounced gradually disappeared and the word was finally reduced to the nasalized *am*.

Equally interesting observations were made by Mr. Charles Darwin on a little boy,[1] whose first utterance, *da*,

[1] "Mind," 7 (July, 1877); also in private communications to the author.

was heard at the age of five and a half months. No sense, however, was attached to it. "When a little over a year old he used gestures to explain his wishes," and at the age of twelve months had already invented the word *mum* (or *mm*) to signify "food" or "I want to eat." The imitative origin of this word is as clear as that of *hamm*, used in a similar way by M. Taine's little girl. The boy soon came to attach it to all articles of food, *sugar*, for instance, being called *shu-mum*. When asking for food, the word was uttered in a highly interrogatory tone, and five months before its invention the child understood its nurse's name. Greater difficulty was experienced in pronouncing the consonants than in pronouncing the vowels, a fact which agrees with that observed by M. Taine, who found that his little girl's first cries consisted of vowels only. According to Mr. Pratt, in his "Samoan Grammar," the Polynesians distinguish words almost entirely by their vocalic elements; at all events, consonants may be changed and transposed at will among them, without preventing a word from being understood, whereas a change in the vowels at once makes it unintelligible. Children, too, seem to recognize words by the vowels they contain, rather than by their consonants. Prof. Holden,[1] however, states that ease of pronunciation far more than the complexity of the ideas expressed, appears to determine their adoption of a word. In one case, where a child of two years of age had acquired the large vocabulary of 483 words, there were 53 words beginning with *b*, but only 16 beginning with *l*. In another case,

[1] "On the Vocabularies of Children under two years of age," in the "Proceedings of the American Philological Association," 1877.

399 words had been acquired at the same age, while in a third the vocabulary amounted to no more than 172. In fact, children vary a good deal as to their quickness of perception and skill in reproducing sounds. While one child begins to speak at the age of twelve months, or learns to pronounce words with ready accuracy, another seems to be dumb up to the age of two or even three years, or acquires a correct pronunciation with the greatest possible difficulty and slowness. Indeed, in some cases, a correct pronunciation is never acquired throughout life, not from any defect in the vocal organs, but from mental or cerebral imperfection. It seldom happens, however, that the child fails to understand the meaning of what is *said* to him, even though unable to reproduce it in turn. Like the dog or horse, which understands the words and tones of its master, or the cat which comes when called by name, he soon learns to associate sounds and ideas, and instinctively catches the sense of an order or a prohibition. No doubt inherited aptitudes have much to do with the facility with which the sense is thus instinctively caught.

The relation of linguistic science to ethnology has already been touched upon in an earlier chapter. Language belongs to the community, not to the race; it can, therefore, testify only to social contact, never to racial kinsmanship. Tribes and races lose their own tongues, and adopt those of others; and while the Jews of Austria and Turkey regard the Spanish of the fifteenth century as their sacred language, the Spaniards themselves have forgotten that any other language, whether Iberian, Keltic, or Teutonic, ever existed in Castile besides Latin.

The Kelts of Cornwall speak English; the non-Aryan population of Wales and Ireland either Keltic or "Saxon." The Jews have adopted the manifold languages of the countries they inhabit, like the provincials of the Roman Empire, who borrowed the speech of their conquerors, or the natives of northern Africa and western Asia, among whom Arabic has become a mother tongue. The modern theory of nationalities, so far, at least, as it is based on the existence of a common language, is but the cry of political intriguers: race in physiology and race in philology are two totally different things. Races physiologically as distinct as Mongols and Turks may be found speaking allied tongues; while races physiologically related, like the Jews of Europe and the Bedouins of Arabia, may be found speaking unallied ones. It is questionable, indeed, whether any race in this age of the world can even physiologically be called pure and unmixed; but it is at any rate quite certain that language can throw no light on the matter. Language is a social product, not a racial one; it grew up to allow the members of a community to communicate one with another, not to bind together the members of a race. The members of a community may have belonged to different tribes and races; nay, in early times, when women were taken from abroad, and captives were used as slaves, they must have done so, but the language in which they addressed each other was the same. Here and there there might have been a woman's language, or a language of the nursery, testifying, in some instances, to the foreign origin of the wife, and separate from the language of the

men; but even in these cases one or other language came in time to prevail. Philology and ethnology are not convertible terms.[1]

Identity or relationship of language, therefore, can prove nothing more than social contact. The fact that the Kelts of Cornwall now speak English shows plainly under what social influence they have been brought. The Jews of Austria would never have put Spanish in the place of Hebrew had they not once have lived in close contact with the natives of Castile. Language is an aid to the historian, not to the ethnologist. So far as ethnology is concerned, identity or relationship of language can do no more than raise a presumption in favour of a common racial origin. Where all else—physical characteristics, habits and customs, religious beliefs and practices—indicate that two populations belong to the same race, similarity of language will furnish additional and subsidiary evidence, but not otherwise. If ethnology demonstrates kinship of race, kinship of speech may be used to support the argument; but we cannot reverse the process, and argue from language to race. To do so, is to repeat the error of third-hand writers on language, who claim the black-skinned Hindu as a brother, on the ground of linguistic relationship, or identify the white race with the speakers of the Aryan tongues. All mankind may be descended from a single pair of ancestors, and yet the languages they speak be derived from different centres; while, on the other hand, we may trace the

[1] See Sayce on "Language and Race," in the "Journal of the Anthropological Institute," 1875.

languages of the globe back to a common source, and yet believe that the several races of the world have had a diversity of origin.

Language, in fact, is not one of the characteristics of race, not one of those fixed and permanent features which distinguish the different ethnological types of man. It did not grow up until man had become a "social animal," and had passed from the merely gregarious stage of existence into that of settled communities. While the characteristics of race remain definite and unalterable, language is ever shifting and changing, ever in the condition of the Herakleitean flux. A Chinaman may exchange his own language for an Aryan one, but he cannot at the same time strip off the characteristics of race. The Ethiopian cannot change his skin, however easily he may change the tongue he speaks. Language, in short, was not created until the several types of race had been fully fixed and determined. The xanthocroid and the melanocroid, the white albino and the American copperskin existed with their features already fixed and enduring, before the first community evolved the infantile language of mankind.

Does the science of language, we may ask, throw any light upon the age to which we may assign this event? Does it help us to answer the question of the antiquity of man? The answer must be both yes and no. On the one side it declares as plainly as geology or prehistoric archæology that the age of the human race far exceeds the limit of six thousand years, to which the monuments of Egypt allow us to trace back the history of civilized man; on the other side it can tell us nothing of the long periods of time that elapsed before the formation of

articulate speech, or even of the number of centuries which saw the first essays at language gradually developing into the myriad tongues of the ancient and modern world. All it can do is to prove that the antiquity of man, as a speaker, is vast and indefinite. When we consider that the grammar of the Assyrian language, as found in inscriptions earlier than B.C. 2000, is in many respects less archaic and conservative than that of the language spoken to-day by the tribes of central Arabia; when we consider further that the parent-language which gave birth to Assyrian, Arabic, and the other Semitic dialects must have passed through long periods of growth and decay, and that in all probability it was a sister of the parent-tongues of Old Egyptian and Libyan, springing in their turn from a common mother-speech, we may gain some idea of the extreme antiquity to which we must refer the earliest form we can discover of a single family of speech. And behind this form must have lain unnumbered ages of progress and development, during which the half-articulate cries of the first speakers were being slowly matured into articulate and grammatical language. The length of time required by the process will be most easily conceived if we remember how stationary the Arabic of illiterate nomads has been during the last four thousand years, and that the language revealed by the oldest monuments of Egypt is already decrepit and outworn, already past the bloom of creative youth.

An examination of the Aryan languages will tell the same tale, although the process of change and decay has been immeasurably more rapid in these than in the

Semitic idioms. But even among the Aryan languages the grammatical forms of Lithuanian are still, in many cases, but little altered from those used by our remote forefathers in their Asiatic home, and in one or two instances are more primitive and archaic than those of Sanskrit itself. Whatever may have been the rate of change, however, it is impossible to bring down the epoch at which the Aryan tribes still lived in the same locality, and spoke practically the same language, to a date much later than the third millennium before the Christian era. A long interval of previous development divides the language of the Rig-Veda, the earliest hymns of which mount back, at the latest, to the 14th century B.C., and that of the oldest portions of the Homeric poems, and yet there was a time when the dialect that matured into Vedic Sanskrit, and the dialect which matured into Homeric Greek were one and the same. Whether or not Herr Poesche is right in believing that Aryan dialects were spoken by the cave-men whose skulls have been found at Cannstadt, Neanderthal, Cro-magnon, and Gibraltar, and who have left behind them memorials of their skill in the shape of carved bones and horns,[1] at all events the age of the first Aryan settlements in Europe must be tolerably remote. And it must be remembered that the parent-Aryan itself was as developed and highly inflectional a language as Sanskrit or Greek; its first stage of growth had been left far behind, much more that primæval era when it was first being elaborated out of the rude cries and grammarless utterances of a barbarous community. It must also

[1] "Die Arier," pp. 54, 55 (1878).

be remembered that this parent-Aryan was but one out of many allied dialects or languages which have elsewhere perished, and, could we follow its history far enough back, may possibly claim relationship with some other family of speech, such as the Alarodian, between which and it there now remains not a trace or link of connection and kinship. Phonetic decay had already stamped its grammar and vocabulary; words like *dwâram*, "door," survive as the last relics of otherwise extinct groups, and the primarily sensuous meaning has faded out of terms which express moral or spiritual or abstract ideas. Even the ease and rapidity with which our children acquire their mother-tongue, point to long ages during which this hereditary aptitude was being formed and accumulated. If it has taken two thousand and more years to elaborate those mathematical conceptions which a school-boy now learns in a few months we must measure the period by æons which has witnessed the growth of our European idioms with all the complexity and wealth of words which a helpless infant learns in an even shorter time.

The Ural-Altaic family of languages bears similar testimony. To find a common origin for Uralic, Turkish, and Mongol, we must go back to an indefinitely great antiquity. The Accadian of Chaldea is an old and decaying speech when we first discover it in inscriptions of 3000 B.C., a speech, in fact, which implies a previous development at least as long as that of the Aryan tongues; and if we would include Accadian, or rather the Protomedic group of languages to which Accadian belongs, in the Ural-Altaic family, we shall have to

measure the age of the parent-speech by thousands of years. The Mongols, moreover, are physiologically different in race from the Ugro-Tatars, and it is difficult to estimate the length of time required for the complete displacement of the original dialects of Mongols, Mantchus, and Tunguses, by those of a foreign stock. But it was at any rate considerable.

Comparative philology thus agrees with geology, prehistoric archæology and ethnology in showing that man as a speaker has existed for an enormous period, and this enormous period is of itself sufficient to explain the mixture and interchanges that have taken place in languages, as well as the disappearance of numberless groups of speech throughout the globe. The languages of the present world are but the selected residuum, the miserable relics, of the infinite variety of tongues that have grown up and decayed among the races of mankind. Since language is a social creation, the first languages will have been as numerous as the first communities. Wherever there was a community, there also was necessarily a language. Language is the creator as well as the creation of society, and though it is true that it is made and moulded by society, it is equally true that without language society cannot exist. The various species of languages that have sprung up since human thought was first clothed in speech must have been as numberless as the species of plants and animals that have flourished on the earth, and just as whole genera and species of plants and animals have become extinct, so also has it fared with the genera and species of language. In some cases the languages of

two or more communities formed independently under similar conditions, climatic and otherwise, may have coalesced into a single group; more often the single group has split itself into numerous dialects which in time become distinct languages.

But the attempt made in the infancy of linguistic science to reduce these groups to a mystical triad has long since been abandoned by the scientific student. To lump the manifold languages of the world, agglutinative, incorporating, isolating, and polysynthetic under a common heading of "Turanian" or "Allophylian" is as unscientific as to refer Aryan and Semitic to one ancestor. It has been shown in a former chapter that the number of separate families of speech now existing in the world which cannot be connected with one another is at least seventy-five; and the number will doubtless be increased when we have grammars and dictionaries of the numerous languages and dialects which are still unknown, and better information as regards those with which we are partially acquainted. If we add to these the innumerable groups of speech which have passed away without leaving behind even such waifs as the Basque of the Pyrenees, or the Etruscan of ancient Italy, some idea will be formed of the infinite number of primæval centres or communities in which language took its rise. The idioms of mankind have had many independent starting-points, and like the Golden Age, which science has shifted from the past to the future, the dream of a universal language must be realized, if at all, not in the Paradise of Genesis, but in the unifying tendencies of civilization and trade.

While linguistic science thus shows that the com-

munities in which man, in the true sense of the word, first existed were numerous and isolated, it is quite evident that it can throw no light on the ethnological problem of the original unity or diversity of the human race. The characteristics of race were fixed before the invention of speech, and to determine whether or not we are of the same blood as the negro and the Mexican, whether the Darwinian is justified in tracing *homo alalus* to a single pair of apes or to several different species is the task of the ethnologist, not of the student of language.

It is, therefore, with man as he appears in history and not as he appears in nature that comparative philology has to do. It is, as we have seen, essentially a historical science, dealing with the historical growth and evolution of consciousness as preserved in the records of speech. Its laws, indeed, must be noted and verified by physiology on the one hand and by psychology on the other, but its results and conclusions have to be brought before the bar of history. The research which finds a Norman-French element in the English language is confirmed by the recorded facts of history, and the existence of the Romanic tongues is explained by the long domination of the Roman Empire. The non-Aryan forms and words which show themselves in the Keltic grammar and vocabulary are in accord with the testimony of history and archæology to the presence of a præ-Keltic and præ-Aryan population in western Europe. And just as the conclusions of comparative philology can be verified or refuted by the historian, so conversely the historian can fill up the breaks in his record by the help of comparative

philology. The contact of tribes in præ-historic times can be proved by the similarity of their dialects, and the foreign names given to objects enable us to determine the source from which they were derived, and the relations that existed between the lender and the borrower. Similarity of language has shown that the Hungarians were once the neighbours of the savage Voguls of the Ural, and the Semitic origin of such Greek words as *alpha* and *beta*, δέλτος "a writing tablet," and φοῖνος "dye," indicates that writing and the purple trade came to Greece from Phœnicia.[1] Where contemporaneous literature fails us we can fall back upon the surer and more enduring evidence of language. The history and migrations of the Gipsies have been traced step by step by means of an examination of their lexicon. The wild speculations of older writers who saw in them wandering Egyptians or Tatars, or even the ancestors of the companions of Romulus, have had to make way for exact and minute history. The grammar and dictionary of the Romany prove that they started from their kindred, the Játs, on the north-western coast of India, near the mouths of the Indus, not earlier than the tenth century of the Christian era; that they slowly made their way through Persia, Armenia, and Greece, until after a sojourn in Hungary they finally spread themselves through western Europe, penetrating into Spain on the one side and into England on the other. Though the determination of the ethnic features and relationships of the Gipsies must be left to the physiologist, comparative philology has

[1] See A. Müller: "Semitische Lehnworte im älteren Griechisch.," in "Bezzenberger's Beiträge," i. pp. 273-301 (1877).

shown itself quite competent to determine their historical origin and fortunes.

Perhaps the chief triumph of comparative philology in the field of historical reconstruction has been the recovery of the history of the Aryan nations in ages about which history and legend are alike silent. Who could have suspected a few years back that we should ever be able to describe the external and internal history of our remote ancestors, their migrations and beliefs, their culture and civilization, with greater certainty and minuteness than is possible in the case of the Saxons of the Heptarchy or even the Hebrews of the Davidic era? Where other records fail, the record of language remains fresh and unimpaired. The ideas and beliefs, the struggles and aims of a community are enshrined in the language it speaks, and if we can once more make this language a living one, can discover the meaning assigned to its words at the time they were first coined and used, the facts and thoughts that it enshrines will lie revealed before us. While the other sources of historical truth,—architectural monuments and inscriptions, skulls and artistic remains, objects of household use, and even contemporaneous annals,—can tell us only of the outward fortunes and history of a people, language, when rightly questioned, can tell us of the far more precious history of mind and thought. As the fossils of the rocks disclose to the palæontologist the various forms of life that have successively appeared upon the globe, so, too, the fossils of speech disclose to the scientific philologist the various stages that have been reached in the growth of human consciousness. In the pages of Fick's Dic-

tionary of the parent-Aryan we may read the religion, the morality, the culture and the civilization of rude tribes who lived and died long before the first hymn of the Rig-Veda was composed, long before the first Hellene had reached the shores of Greece, or the first Indo-European word had been written down. Armed with the comparative method, we can revivify the older strata of speech, and thereby also the older phases of a community's life. History, in fact, is living language, just as myth is dead language; it describes the past actions and ideas of a society in words which represent them as they actually were.

History is not the only department of study which has derived unexpected help from comparative philology. Logic, too, deals with language, and its disciples will never escape the dangers of confusion and logomachy until they recognize that formal logic is based on language and must therefore be secured against a false analysis and interpretation of that language. As yet, however, the recognition has not been made. The philosophy of speech, in the hands of the Greeks, suffered from the introduction of logic into grammar, and revenge was taken by grounding logic upon the definitions of an imperfect grammar. The Greek grammarians with all their acuteness were unable to avoid the mistakes inevitable in those who know but a single language, and Aristotelian logic, which has continued practically unchanged up to the present day, starts with the rules and deductions of the Greek grammarians. The latest attempt to improve upon it by establishing a distinction between "connotative" and "denotative"

terms has been shown by Mr. Sweet to rest upon a mere accident of Indo-European grammar, proper names which are said to be purely denotative really connoting at least two attributes, "human" and "male," and "connotative" words like "white" being as much abstract names as "whiteness," and like it signifying attributes without any reference to the things that possess the attributes.[1] It is difficult to eradicate the belief that the forms in which we think are identical with the thought itself, and it is only linguistic science that enables us to see that many of the forms of grammar which we imagine necessary and universal are after all but accidental and restricted in use. The cases of Latin and Greek do not exist in the majority of languages; the Polynesian dialects have no true verbs; and the Eskimaux gets on well enough without "the parts of speech" that figure so largely in our own grammars. The distinction made by writers on logic between such words as *redness* and *red* is a distinction that would have been unintelligible to the Tasmanian; "red," in fact, has no sense unless we supply "colour," and "red colour" is really the same as "redness."

Formal logic is founded on Aristotle's analysis of the proposition and the syllogism. Hegel long ago pointed out that the analysis was an empirical one dependent on the observation of the individual thinker, and the criticism of Hegel is supplemented by the teaching of comparative philology.[2] The division of the sentence into two

[1] "Words, Logic, and Grammar," in the "Transactions of the Philological Society," 1876, pp. 18, 19.

[2] See Hermann: "Die Sprachwissenschaft nach ihrem Zusam-

parts, the subject and the predicate, is a mere accident; it is not known to the polysynthetic languages of America, which herein reflect the condition of primæval speech. Even in Greek and Latin we meet with complete sentences like τύπτει and *amat* where the subject is not expressed, and may therefore be either "he," "she," or "it;" and the Aryan verb was originally compounded with the objective and not the subjective pronoun, *bhavâmi* being "existence of me" and not "I exist." As Mr. Sweet observes,[1] "the mental proposition is not formed by thinking first of the subject, then of the copula, and then of the predicate: it is formed by thinking of the two *simultaneously*." Consequently "the conversion of propositions, the figures, and with them the whole fabric of Formal Logic fall to the ground." So far as the act of thought is concerned, subject and predicate are one and the same, and there are many languages in which they are so treated. Had Aristotle been a Mexican, his system of logic would have assumed a wholly different form. Even the logical analysis of the negative proposition is incorrect. The negation is not part of the act of comparison between subject and predicate, that is, is not included in the copula, but belongs to the predicate, or rather attribute, itself. "Man is not immortal," is precisely the same as "man is mortal," "mortal" and "not immortal" being equivalent terms, and had Aristotle's successors spoken lan-

menhange mit Logik, menschlicher Geistesbildung und Philosophie" (1875). He notices that logical fallacies arise not from ignorance of the syllogistic form, but from ambiguities of the thoughts as conveyed in words and sentences.

[1] *L. c.* pp. 20, 21.

guages, which, like those of the Ural-Altaic family, possess a negative conjugation, they would not have overlooked the fact.

The progress even of the science of language itself has been checked by the evil influence of formal logic. The compilers of the "Universal Grammars" or "Grammaires raisonnées" of the last century exercised an unconscious influence upon the founders of comparative philology. It was tacitly assumed that the analyses of logic were embodied in language, and that if we could penetrate far enough back into the history of speech we should find it a simple representation of the logician's analysis of thought. That which is logically prior must, it was supposed, be historically so too. Hence came the false theories that have been put forward in regard to the origin of language, the nature of roots, and the priority of the word to the sentence. It was the old error of confounding that which seems simplest and most natural to us, with that which seems simplest and most natural to savage and primitive man.

A right conception of logic, however, is of less practical importance than a right conception of grammar, since for one who is instructed in the principles of formal logic there are twenty who are instructed in the principles of grammar. And the grammar that is taught, as well as the method of teaching it, is essentially unsound. Whatever may be the revolution effected by comparative philology in the study of logic, the revolution it has already effected in the study of grammar is immeasurably greater. The grammars we have inherited from Greece and Rome are largely founded on false theories,

and filled with imaginary facts and false rules. We cannot know the true nature of things except by contrast and comparison, and opportunity to contrast and compare was wanting to the authors of our school-grammars. "The definition of the noun," says Mr. Sweet, "applies strictly only to the nominative case. The oblique cases are really attribute-words, and inflexion is practically nothing but a device for turning a noun into an adjective or adverb."[1] This fact comes clearly into view when we trace the Aryan case-endings to their origin,[2] or consider that "man's life" and "human life" mean one and the same thing. In "flet noctem," "he weeps all night," *noctem* and "night" are simply adverbs of time. The accusative is but the attribute of the predicate, "he drinks wine" being equivalent both to "he is drinking wine" and to "he is a drinker of wine" or "a wine-drinker," where the qualificatory character of "wine" becomes at once manifest. Mr. Sweet remarks with justice that "as far as the form goes, 'king' in 'he became king,' 'he is king,' may be in the accusative." In Danish *det er mig* is the sole representative of "it is me," the French *c'est moi*. As for the cases with which English grammars were once adorned, they were but part of the attempt to force all grammars alike into the traditional form of Latin grammar, without regard for the real and living facts of language. It was difficult for those who had been taught to look upon Latin as the model of all speech, and Latin grammar as the normal type to which every other grammar must con-

[1] "Words, Logic, and Grammar," p. 24.
[2] See above, ch. v.

form, to conceive of languages like the American or the Chinese, or even, we may add, the English, which did not possess any cases at all.

Adjectives, again, embrace a good many words which the grammarians ordinarily class as substantives and pronouns. In "cannon ball" "cannon" is as much an adjective as "black," and such pronouns as "some," "this," "that," "one," and the derived articles "the" and "a" ought really to be classed as adjectives. Pronouns in the true sense of the word are always relative, that is they always relate to some one or something that has gone before. "He," for instance, is at bottom identical with "who," and where we should say "this is the man who loves," the Polynesian would say "this is the man: he loves." As has been pointed out previously, the so-called relative pronoun was originally a demonstrative. Even the distinction of gender in the pronouns is a mere accident of speech. The same word serves the agglutinative tongues for "he," "she," and "it," and the little need that really exists for the distinction may be seen from the obliteration of it in the polished and cultivated Persian, as well as in the dialect of the Austrian Tyrol. When a preposition is added to a pronoun or a noun we have a compound attribute, the preposition itself being modified attributively by the noun, and the two together constitute an attribute of some other word.[1]

Such are some of the grammatical facts that we can observe as soon as the influence of those Latin and Greek and English grammars which are still taught in hundreds of schools has been shaken off. We have not

[1] Sweet: *l. c.* p. 30.

to go far to discover how full such "text-books" are of statements which comparative philology has shown to be either false or inadequate. The very idea of a verb "governing" a case is an absurdity, and the phrase can only be maintained on the same principle as that on which we still speak of the sun "rising" and "setting." The locative case is ignored both in Latin and Greek, and a rule of syntax lays down that "every verb admits a genitive case of the name of a city provided it be of the first or second declension, and of the singular number; but if the name be of the plural number only, or of the third declension, it is put in the ablative." The matter is no better when we turn to the verb. Here the conjunctive *regam* or *audiam* is confounded with the optative *amem* and *sim*, while the optative *reget*, *audiet* is called a future; the accusative *amatum* and dative *amatu(i)* are termed supines; and a verb in -ω is made the normal type of the Greek conjugation. It is needless to refer to the many impossible or non-existent forms a boy is forced to learn by heart, or to the doctrine ground into him that a word is inadmissible in Latin and Greek which does not occur in the extant fragments of a few literary men.

In fact, the current system of teaching grammar is destructive of all true conception and appreciation of what language really is. Language is no artificial product, contained in books and dictionaries and governed by the strict rules of impersonal grammarians. It is the living expression of the mind and spirit of a people, ever changing and shifting, whose sole standard of correctness is custom and the common usage of the community.

What is grammatically correct is what is accepted by the great body of those who speak a language, not what is laid down by the grammarian. To extract certain rigid rules from the works of a selected number of writers, and treat everything which does not conform to these rules as an exception or a mistake, is to train up the young to a radically wrong notion of speech. The first lesson to be learnt is that there is no intrinsic right or wrong in the use of language, no fixed rules such as are the delight of the teacher of Latin prose. What is right now will be wrong hereafter, what language rejected yesterday she accepts to-day. The exception is often a survival of what was once the prevailing usage, the current form may be the creation of a false analogy. There are no golden and silver ages in grammar, whatever may be the case in literature, and to confound the analysis of an arbitrarily limited literature with the knowledge of a language is to put the shadow for the substance, the frigid maxims of the schoolmen for the pure spring of living speech.

A literature guides us to the knowledge of a dead tongue, but it cannot do more. To know what that tongue actually was when spoken and not merely written down, what were the changes it underwent, what particular period or periods in its history its literature represents, and how fully it does so, we must turn to historical philology. In no other way can we learn its true nature and development, can understand its grammar and observe the stages of growth or decay through which it has passed. It is not the least practical benefit conferred by comparative philology that it has dissipated the old

idea of a fixed and stationary standard in language, and shown that the forms of grammar in which thought expresses itself are but variable accidents dependent on the conditions which surround a people or an age.

But while thus sweeping away the rules and maxims elaborated by the ancient grammarians, comparative philology has substituted for them the scientific conception of law. Language, like nature, is ever changing, but its changes take place in accordance with fixed, inviolable law. There is nothing arbitrary and capricious about them. They are the result of certain uniform sequences which we generalize and sum up under the name of scientific laws. It is well to impress this fact deeply upon our minds. We are ready enough to admit the action of law in the realm of material nature; it is otherwise, however, wherever the element of volition comes into play. Language, standing as it does upon the confines of both the material and the mental worlds, touching physiology on the one side and psychology on the other, might seem at all events partially removed from the influence of scientific laws. It is, therefore, of the highest moment that it should be studied in such a way as to show that this is not the case. It is becoming recognized that the minds of the young should be accustomed from the first to the conception of the universal prevalence of law, and efforts are being made to replace the study of language by that of physical science upon this very ground. But it is only the study of language as carried on according to exploded and antiquated methods, that is open to the charge of misleading and perverting the growing intelligence; carried on accord-

ing to the principles of scientific philology it becomes the surest means of impressing on the mind the great fact of the universality of law amid all the change and development of nature.

What is wanted, then, is that grammars should be written in accordance with the method and results of comparative philology, and when written should be taught and studied. Much has already been accomplished in this direction. The Greek Grammar of G. Curtius, the Latin grammars of Schweitzer-Sidler, Schmitt-Blanck, Müller-Lattmann, and Roby, the *Sprachwissenschaftliche Einleitung in das Griechische and Lateinische* of Ferdinand Bauer; the German grammars of Scherer, Vilmar, and Heyse; the French grammars of Brachet, Meissner, and Ayer; and the English grammar of Morris, in spite of their inevitable imperfections, have placed the study of the languages with which they deal on a wholly new footing. It is time, therefore, that they should supersede the grammars now in use in the majority of schools, though the teachers in most instances will probably have first to be themselves taught. As Breymann observes:[1] "Education according to the new method implies three elements—memory, reason and insight; whereas education according to the old method was almost wholly confined to that of memory," and as it is more desirable to develop three sides of a man than one side only, there can be little hesitation as to which mode of education is the best. No doubt the memory is chiefly exercised in young children, but the mere fact that a child can learn

[1] "Sprachwissenschaft und neuere Sprachen," p. 23 (1876).

to speak its mother-tongue, and sometimes other tongues as well, proves that it also possesses reason and insight, which may be drawn out by judicious instruction. It must do a child intellectual good to understand what it learns, besides assisting the process of learning; and to understand was the last thing that the old school-grammars enabled the learner to do. In teaching Latin and Greek, it is true, there will still be much which must be learnt by heart as now; but a boy will gain much if he is made to see that Latin and Greek are not mere collections of arbitrary symbols or Chinese puzzles, but languages like his own, undergoing similar transformations, and subject to similar laws. It is said that we never really know a language until we think in it, and it is impossible to think in a language which we have learnt after the fashion of a parrot.

But the question arises: Can we ever learn to think in a dead tongue? can we ever clothe the dry bones with flesh and make Latin and Greek become to us as German or French? Here, again, comparative philology helps us to a practical answer. The method alike of science and of nature is to proceed from the known to the unknown; and if we are to study language to any purpose we must follow the same method. The traditional system of education in our boys' schools is the haphazard growth of a time whose needs and opportunities were essentially different from those of our own. Latin was taught because it was the common language of the church and the law, and for an ambitious youth it was as necessary to know Latin as it was to know his own language. The Renaissance placed Greek on an equal footing with Latin.

Modern Europe had as yet but little literature; and that little reflected the beliefs of a discredited Church. For the new ideas which were to mould the Europe of the future, for the masterpieces of human thought and eloquence, the scholars of the Renaissance had to turn to the writers of ancient Rome and, more especially, of ancient Greece. Latin and Greek naturally took their places as the indispensable foundation of a gentleman's education.

All this is now changed. Modern literature is larger than the ancient classics, and at least as valuable, while science with its myriad paths of inquiry has made it impossible for a single man to master the whole circle of knowledge. Here, as elsewhere, a division of labour is demanded; if we are to follow up one line of research with success, most other lines must be forsaken. But before thus setting out on the chosen path of life, "a general education" is required. And the object of this general education is twofold. Our mental faculties have to be sharpened and expanded, and a stock of knowledge to be acquired which will serve us in our dealings with the world or in the department of study we pursue. In order that these two objects may be attained with the greatest possible thoroughness during the short years of our general education, we must be careful that the subjects of study chosen for the sake of the one should be suitable for the other also. To teach a boy useless or spurious knowledge for the sake of sharpening his intellect is a crime. We of the nineteenth century, "when every hour must sweat her sixty minutes to the death," cannot afford to be crammed with what we have hereafter to forget or unlearn, while there is so much that we

must know if we are not to be handicapped in the race of life. If we can arrive at the same end by two ways, one short and the other long, the teacher ought not to hesitate as to which he should prefer.

Instead of beginning with the extinct languages, which we can know only indirectly, education should begin with those living idioms from which alone we can learn the true nature of actual speech. Language does not consist of letters, but of sounds; and until this fact has been brought home to us, our study of it will be little better than an exercise of memory. We must start with the sentence, the real unit of speech, and not with the isolated word; we must, in short, adopt the same method in learning another tongue that we adopted in infancy in learning our own.[1] There is consequently but one way of acquiring a true knowledge of a foreign speech and of coming to understand what language actually is. This is by first learning to speak the language in question, and afterwards translating its living sounds into the arbitrary symbols of written letters. When once we have been taught to think in two or more different languages, and have thus discovered the independence of ideas and their expression, it will be comparatively easy to pass to the acquisition of other, and it may be, extinct tongues. To have realized that all languages, whether living or dead, are at bottom the same, governed by the same general laws, and designed for the same general purposes, is to have penetrated into the secret of speech, and made the study of language take its rightful place as a valuable

[1] See L. J. V. Gérard: "On the Comparative Method of learning Foreign Languages," (Leicester) 1876.

instrument for training the mind. In the passage from the modern to the ancient languages, comparative philology will lead the way. It will show us how the forms of modern French presuppose those of ancient Latin, how German or English grammar does but repeat under new forms the principles and conceptions of Greek grammar, and how the changes undergone by letters in the classical tongues are explained by the changes that are being undergone by sounds under our own eyes. With a system of education like this, following as it does the method of nature and science, time, brains and energy will be saved, and a truer and deeper knowledge of Latin and Greek will be gained than was ever possible upon the old plan. At the same time the study of languages will cease to be a mere mental gymnastic, or the gratification of an idle curiosity, to be laid aside and forgotten at the first convenient opportunity; the boy will have obtained an art of the utmost value to him in after life, the art, namely, of speaking and writing modern languages, while the insight he has gained into the nature of speech, and the training he has had in catching and reproducing unfamiliar sounds, will enable him to acquire other languages and detect differences in pronunciation with an ease and readiness which would else have been impossible. The current system of education, like the old-fashioned "scholarship" on which it rests, is a thing of the past, the product of chance and not of science; and it justly deserves Montaigne's reproach: "C'est un bel et grand adgencement sans doubte que le grec et le latin, mais on l'achete trop cher . . . . et cette longueur

[1] "Essais," i. 25.

que nous mettons a apprendre ces langues est la seule cause pourquoi nous ne pouvons arriver à la grandeur d'ame et de cognoissance des anciens Grecs et Romains." Friedländer,[1] Bratuscheck,[2] Ostendorf and Breymann, all agree, from the point of view of scientific philology, in urging that the study of the classical tongues should be preceded by that of the modern ones. As Ostendorf remarks,[3] "a satisfactory organization of a higher system of education in schools is inconceivable so long as instruction in foreign languages in gymnasia and polytechnic schools of the first rank has to begin with Latin." The whole question was fully discussed at a conference held under the presidency of Councillor Wiese at Dresden in the autumn of 1873, and answered on the side of science and reason.

The teaching of Latin and Greek must itself be reformed, not only in the matter of grammar, but still more in the matter of pronunciation. Our insular pronunciation of Latin is at once incorrect, inconsistent, and perplexing. By the help of comparison and induction, the pronunciation of Latin, as observed by the upper classes of Rome under the Emperors, has been recovered, and Corssen's great work on the "Aussprache, Vokalismus und Betonung der lateinischen Sprache," contains a full account both of it and of the mode in which it has been restored. The pronunciation of ancient Greek is a matter of greater difficulty, and we know that it changed very

[1] "Ueber die Reformbestrebungen auf dem Gebiete des höheren Schulwesens für die männliche Jugend in Deutschland" (1874).

[2] "Ueber den Unterricht in der französischen Grammatik."

[3] "Mit welcher Sprache beginnt zweckmässiger Weise der fremdsprachliche Unterricht" (1873).

considerably between the age of Plato and that of Dionysius Thrax. In the time of the latter, for instance, θ, ζ and χ had become single sounds, whereas their compounded character appears plainly in the works of the tragedians where τ' and κ' before an aspirated vowel become θ (that is, *t*+*h*) and χ (*k*+*h*). During the centuries of political decay and disruption that followed, changes in pronunciation went on rapidly, and there can be little doubt that in some respects even our English way of pronouncing Greek is more correct than that of the modern Greeks, who confound most of the vowels and diphthongs together under the same monotonous sound of *e* (*i*). Nevertheless, since Greek is still a spoken language, and the classical revival at Athens has made it possible for an English scholar to converse freely with a Greek when once the obstacle of a divergent pronunciation is overcome, it is desirable that we should forego our own prejudices and adopt that pronunciation which would allow us to turn to practical use the long hours and labours we have spent at school over the Greek tongue. The same difficulty does not meet us in the case of Latin. Here there is nothing to prevent us from employing the pronunciation which is approximately the right one, and it is much to be hoped that the movement in favour of a reformed pronunciation will speedily spread and prevail. At present, it is impossible for the comparative philologist in England to lecture upon Latin without the help of a black board and chalk. When he speaks of *i* in Sanskrit or other tongues, the ordinary student thinks of *e* (as in English); when he refers to *e* and *ai* the audience writes down *a* and *i*; and so long as *agis* and

cecidi are pronounced *ejis* and *sesīdai*, it is impossible to show that they have any connection with *ago* and *cadere*.

But the reform of Latin and Greek pronunciation, which is one of the practical results of a more extended acquaintance with comparative philology, would be incomplete without the more crying reform of our own English mode of spelling. It is needless to enlarge here upon the practical evils of this curious system of symbolic expression, which obliges a child to learn by heart the spelling of almost every separate word in the dictionary, the consequence being that at least forty per cent. of the children educated in our board-schools leave school unable to spell, and so, little by little, neglect to read or write at all, and fall back into the condition of their illiterate forefathers. Dr. Gladstone calculates that the money cost of teaching this modicum of learning in the elementary schools "considerably exceeds £1,000,000 per annum," and that in Italy, where the spelling is phonetic, a "child of about nine years of age will read and spell at least as correctly as most English children when they leave school at thirteen, though the Italian child was two years later in beginning his lessons."[1] Nor need we do more than allude to the vicious moral training afforded by a system that makes irrational authority the rule of correctness, and a letter represent every other sound than that which it professes, or to the difficulty thrown in the way of learning to speak a foreign language by the dissociation between sound and symbol to

[1] See his excellent little book on "Spelling Reform from an educational point of view" (1878), pp. 14, 20.

which the child has been accustomed from his earliest years. The language of the ear has to be translated into the language of the eye before it is understood, and this it is which makes the English and the French notoriously the worst linguists in Europe. The inadequacy of English spelling is exceeded only by that of Gaelic, and in the comparative condition of the Irish and Scotch Gaels on the one side and the Welsh Cymry on the other, we may read a lesson of the practical effects of disregarding the warnings of science. Welsh is phonetically spelt, the result being that the Welsh, as a rule, are well educated and industrious, and that their language is maintained in full vigour, so that a Welsh child has his wits sharpened and his mind opened by being able to speak two languages, English and Welsh. In Ireland and Scotland, on the contrary, the old language is fast perishing; and the people can neither read nor write, unless it be in English.[1]

[1] The following books and papers may be consulted on the subject of the reform of English spelling:—A. J. Ellis: "Three Lectures on Glossic;" "Pronunciation for Singers;" "Orthography in relation to Etymology and Literature;" "Early English Pronunciation;" Bikkers: "The Question of Spelling Reform;" J. H. Gladstone: "The Spelling Reform;" "Spelling Reform from an educational point of view;" Hadley: "Is a Reform desirable in the Method of Writing," in "Philological and Critical Essays;" Haldeman: "Analytic Orthography;" E. Jones: "Spelling and School-boards;" "The Revision of English Spelling a National Necessity;" "The Pronouncing Reader on the Anglo-American System;" Latham: "A Defence of English Spelling;" Fleay: "English Sounds and English Spelling;" March: "Orthography," in the "Cyclopædia of Education and Yearbook of Education, 1877;" "Opening Address before the International Convention for the Reform of English Orthography;" Max Müller: "Spell-

But the practical evils of our present spelling must be left to others to deal with. To the scientific philologist it is at once an eyesore and an incumbrance. What he wants to know is, not how words are spelt, but how they are pronounced. His object is to trace the gradual changes that sounds undergo, and so determine the laws which they obey. A corrupt or antiquated spelling only misleads and confuses. The whole fabric of comparative and historical philology is based on the assumption that Hindus, Greeks, Romans, Goths, and others, spelt their words pretty much as they pronounced them. The objection that a reformed spelling would destroy the continuity of a language or conceal the etymology of its words, is raised only by ignorance and superficiality.

ing" (reprinted from the "Fortnightly Review," April, 1876); Pitman: "A Plea for Spelling Reform" (a series of tracts compiled from periodicals, &c., recommending an enlarged alphabet and a reformed spelling of the English Language); Sweet: "A Handbook of Phonetics;" Whitney: "How shall we Spell," and "The Elements of English Pronunciation," in "Oriental and Linguistic Studies," 2nd series; Withers: "The Spelling hindrance in Elementary Education;" "Alphabetic and Spelling Reform an Educational Necessity;" "The English Language Spelled as pronounced;" "On Teaching to Read;" —— the "Proceedings of the American Philological Association," 1874-8 (containing Addresses by March, Trumbull, and Haldeman); Burns's "Spelling Reformer;" Pitman's "Phonetic Journal;" "The Bulletin of the Spelling Reform Association" (1877-9); Ellis, Sweet, and Spedding in the "Academy," Feb. 24, March 3, March 10, March 17, June 2, June 9, June 16, June 23, and July 9, 1877; Skeat in the "Athenæum," April 29 and May 27, 1876; Spedding in the "Nineteenth Century," June, 1877; "Report of the Conference held in London, May 29, 1877." For Spelling Reform in Germany see "Reform," published monthly at Bremen (1877-9), and the "Verhandlungen der Konferenz zur Herstellung grösserer Einigung in der deutschen Rechtschreibung," Jan. 1876.

The continuity of a language consists in its sounds, not in its letters; in the history of the modifications of pronunciation through which it has passed, not in a fossilized and deceitful spelling. As for etymology, our present spelling, the invention of printers and præ-scientific pedants, is as often false as right. *Could*, for instance, the past tense of *can*, has an *l* inserted in it, because *should*, the past tense of *shall*, has one; *rime* is spelt *rhyme* as though derived from the Greek ῥυθμὸς; and it is not so long since *lantern* was written *lanthorn*, as *sweetard* is still written *sweethcart*. But in a very large proportion of words the spelling no longer suggests even a false etymology; while to make the spelling of every word declare its own origin is to attempt a sheer impossibility. A different spelling of words which are pronounced in the same way is no assistance to the reader, but a mere burden upon the memory; apart from the fact that no difficulty is experienced in distinguishing the sense of different words written in the same way, such as *box* or *scale*, or that words of identical origin and sound, like *queen* and *quean*, are sometimes written differently, we never find ourselves at a loss to understand homophonous words when we hear them spoken, although in conversation we have not the same leisure and power of knowing the end of a sentence that we have in reading. As a matter of fact, however, etymology is the province of the professed philologist, not of the amateur, and the absurd paradoxes and lucubrations upon language that even now teem from the press are the result of a belief that anyone who has a smattering of Latin and Greek is qualified to pronounce upon the nature and origin of

words. In astronomy or any other of the physical sciences such a presumption is now almost inconceivable; that it should still be possible in linguistic science shows what need there is of impressing its facts and method upon the minds of the young. One who has been properly trained in the principles of comparative philology will at least have learnt that the etymology even of English words is not to be taken up hastily and without preparation, but that it is a difficult and delicate task, which demands all the resources of the practised student of phonology and the philosophy of speech.

To speak of spelling reform, however, is really to speak inaccurately. What is wanted is not a reformed spelling, which though it may approximately represent our present pronunciation, would become an antiquated abuse in the course of a generation or two, but a reformed alphabet. For practical use, an alphabet of forty characters would sufficiently represent the principal varieties of sound heard in educated speech, each character, of course, denoting a distinct sound, and one distinct sound only. The scientific philologist would have his own alphabet, whether Prince L-L. Bonaparte's, Mr. Melville Bell's, Mr. A. J. Ellis's, or Mr. Sweet's, for marking the minute shades of difference in English sounds, as well as those sounds which do not occur in the "Queen's English," or in any form of English at all. But the practical phonetic alphabet, of which Mr. Pitman's, notwithstanding certain imperfections, may well serve as a model, would prove an inestimable benefit both to the educator and to the philologist. The child, on the one hand, would have to commit to memory

only forty symbols and their values in order to know how to read and write, while the philologist would be able to discover the peculiarities of individual and dialectal pronunciation, as well as the changes undergone by sounds in a given number of years. With a practical alphabet of this kind, too, it would be found that the pronunciation, and consequently the spelling, of the educated classes throughout the country did not differ much more than the spelling of certain words by different printing-presses at the present time. Adults accustomed to the current alphabet would have no greater difficulty in learning the additional characters than they have in learning the Greek or German letters; and they would at any rate have the satisfaction of feeling that they were approximating towards the civilized condition of the ancient Hindu, who had an alphabet of forty-nine characters, each standing for a single distinct sound, and were correspondingly receding from the condition of such semi-barbarous populations as the Tibetans, the Burmese, or the Gaelic, among whom spelling and pronunciation agree as little as in English itself.

No doubt the printers would suffer at first by a change in our spelling, and the change, therefore, would have to be introduced gradually, perhaps by means of transitional modes of spelling. But a time would come when the whole current English literature would be published in the new type, our present books presenting no greater difficulties to the ordinary reader than the poems of Spenser do now. Indeed, the difficulties would be far less, since they would contain no obsolete and unknown words, such as

make the task of studying the works of Spenser or Chaucer doubly hard. A page of Pitman's "Phonetic Journal" is not hard to decipher, even without a knowledge of the alphabet in which it is written.

But in order that a reformed alphabet may have the support of the scientific philologist it is necessary that it should be international, that is to say should assign to the symbols of the vowels (and wherever possible of the consonants also) the phonetic powers they possess in the ancient Latin alphabet, and, generally speaking, in the modern continental alphabets as well. The comparative philologist will gain but little, if any, help from an alphabet in which *a*, for instance, continues to have the value given to it in *mane*, or *i* the value given to it in *I*. The reformed alphabet must be based on a scientific one. Then, and then only, too, will there be a chance of our realizing the dream of linguistic science,—a Universal language. It is towards this end that the comparative philologist works, this is the practical object to which his eyes are turned. And when once the needless stumbling-block of a corrupt spelling is removed, everything seems to point to English as destined to be the common tongue of a future world. Not, perhaps, English as it is now spoken, with a few relics of primitive inflection still clinging to it, but such an English as the Pigeon-English of China which Mr. Simpson has prophesied will become the language of mankind.[1] English may be heard all over the world from the lips of a larger

[1] "China's Place in Philology," in "Macmillan's Magazine," Nov. 1873.

number of persons than any other form of speech ; it is rapidly becoming the language of trade and commerce, the unifying elements of our modern life. Science, too, is beginning to claim it for her own, and it is not long ago that a Swedish and a Danish writer on scientific subjects each chose to speak in English rather than in their own idioms for the sake of gaining a wider audience. Little by little the old dialects and languages of the earth are disappearing with increased means of communication, the growth of missionary efforts, and let us add also, the spread of the English race, and that language has most chance of superseding them which, like our own, has discarded the cumbrous machinery of inflectional grammar. The great Grimm once advised his countrymen to give up their own tongue in favour of English, and a time may yet come when they will follow the advice of the founder of scientific German philology. That a universal language is no empty dream of "an idle day" is proved by the fact that the civilized western world once possessed one. Under the Roman empire the greater part of Europe was bound together by a common government, a common law, a common literature, and, as a necessary consequence, a common speech. When the darkness of barbarism again swept over it, and the single language of civilized Rome was succeeded by linguistic anarchy and barbarism, the Church and the Law, the sole refuges of culture, still preserved the tradition of a universal tongue. It was not until the Reformation shattered Europe into an assemblage of hostile nationalities that language, as the

expression of the highest spiritual wants and feelings of man, became finally disunited and disuniting. Diplomacy, indeed, the one attempt to harmonize the rival members of "the European family," had its common speech; but diplomacy was powerless against the stronger passions which were shaping the Europe of a later day. Now, however, there are signs that religion is at last ceasing to be an element of disunion, and becoming instead a bond of sympathy and common action among all educated men. The mischievous cry of nationalities, which found support in the crude and misunderstood theories of immature philology, is dying away; we are coming to perceive that language and race are not synonymous terms, and that language is but the expression of social life. Whatever makes for the unity and solidarity of society makes equally for the unity and solidarity of language. The decaying dialects of the world may be fostered and wakened into artificial life for a time; but the stimulus soon disappears, and the natural laws of profit and loss regain their sway. By clearing away old prejudices and misconceptions, by explaining the life of language and the laws which direct its growth and decay, the science of speech is silently preparing the ground for the unhindered operation of those tendencies and movements which are even now changing the Babel of the primæval world into the "Saturnia regna" of the future, when there will be a universal language and a universal law. Genius is predictive, and the outlines of a philosophical language which Leibnitz designed, and the universal language

which Bishop Wilkins actually composed,[1] may after all be something more than the ideal of a literary enthusiast or the dream of an unpractical philosopher.

[1] "Essay towards a Real Character and a Philosophical Language" (1668). See Max Müller's analysis in "Lectures on the Science of Language," ii. pp. 50-65.

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becomes a_2 (Greek and Latin *o*). Long *ā* is analyzed into a_1 (*e*) + A (*a*) or a_2 (*o*) + A; *βᾱμα* : *βωμός* = *κέρμα* : *κόρμός*. Every root contains a_1 which may be changed into a_2; and every weakening of a syllable implies the dropping of a_1. The *a* sound, which does not essentially differ from A, and appears in Sanskrit as *i* or *ī*, under certain circumstances combines with a preceding *i*, *u*, or vocalized *r*, *n*, and *m* to lengthen these latter sounds.)

[See also H. Osthoff in Kuhn's "Zeitschrift," 24. 4 (1878), pp. 417-426. Osthoff denies that either ε or ο has been developed in Greek out of the sonant nasal or vocalized *n*, and endeavours to explain away contrary instances. Nevertheless, it would seem that ε really does sometimes take the place of *ȧ* in such cases. Osthoff shows that while an original unaccented sonant nasal is represented in Greek by *ȧ* (*ȧν*) and in Gothic by *un*, an accented one is represented by *ā* (*ān*) in Greek and *in* (as in the German *sind*) in Teutonic. The two forms of the sonant nasal are not distinguished in the other European Aryan languages.]

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ABSTRACT and spiritual ideas, as *spirit*, *virtue*, *intellect*, of sensuous origin; at the outset only, words for the visible and sensuous, till the mind employed metaphor to express the higher imaginations of the soul; metaphors still necessary in dealing with abstract subjects and in philosophic reasoning; add a charm to poetry; the creations of mythology mainly the work of metaphor; modern science accepts a "nature" which clothes itself with the attributes of humanity and sex; the power in language of rising from the concrete to the abstract made Hieroglyphic writing possible, and enables the Chinaman to adapt his system to new ideas, i. 103-4.

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scholars on the philosophy of grammar, i. 37; Dr. Murray held that all the languages of the world were derived from one, consisting of a few monosyllables; pointed out the relationship of Sanskrit and Persian to the Aryan dialects of Europe, and affinities of Scythian words; Whiter in his "Etymologicum Magnum" exceeded Murray, mixed up impartially English, Greek, Latin, French, Irish, Welsh, Sclavonic, Hebrew, Arabic, Gipsey, and Coptic, &c.; examples of his derivations, *ib.* 37-8.

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Epicureans in their inquiries on language explained everything in accordance with the theory of atoms; held that language was natural to man, and the different sounds in different languages for the same object were due to circumstances, climate, social condition, constitution and physique, as the cries of animals, i. 13.

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Eponymous heroes and popular etymologizing; Remus and Romulus, ii. 247-8.

Eskimaux, the supposed descendants of the cave-dwellers in Southern France, have preserved their old habits of thought, and yet our class of speech differs less from theirs and the Algonquin than the dialects of China and the jargon of the Mongols and Turks, i. 126.

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Faculty of speech, its origin and exercise; where located, according to M. Broca, ii. 302-3; the grand distinction between man and the brute, *ib.* 304.

Faidherbe endeavoured to bridge over the gulf between man and the ape by pointing to the clicks of the Bushman, and the cries of the *cebus azaræ* of Paraguay, when excited, i. 76-7.

Falsetto notes, how produced, i. 247, and *notes.*

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Fetishism, origin of; the worship of stocks and stones, or objects which satisfied man's daily wants, or warded off evils,—investing them with divinity whilst useful; custom of the Indians of Columbia; the Palladium of Troy, the Bethels of the Semite, the Ephesian "stone," wand of Hermes, arrows of Apollo, and other symbols of Greek divinities, only the survivals of a primitive fetishism, ii. 292-3.

Fick on the derivation of Western and Eastern Aryan from two parent stems; these again from a primitive speech; proof of their original unity; dialects of Asia Minor and Armenia; his conclusion confirmed by the cuneiform inscriptions, i. 306-7.

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Finnic idioms nearly inflectional have suggested their relationship to Aryan, but have never cleared the border between flection and agglutination, i. 131.

Finnic Kalevala, an epic worthy of comparison with Homer, or the Nibelungen Lied; adven-

tures, travels, final struggle with Luhi, and search for the mysterious Sampi; similarity of the Esthonian Kalevipoeg; the ground of the poems shows that Esths and Finns started with a common stock of ancestral myths; the Ugric Voguls have their epic on the Creation and Deluge, and the giants of the ancient world, strikingly similar to the legends of the Accadians, and show the high antiquity of these old Altaic myths, ii. 197-8; the Lapps have their mythical epic, and the myths and tales of the Tatars are equally numerous; the agglutinative character of the language, and transparency of the proper names, make it easy to trace their original meaning, ii. 197-9.

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Fox maintained that *Bordeaux* should be pronounced *Bordox*, i. 178.

French Encyclopædia devoted six volumes to Grammar and Literature; divided grammar into general and particular; the principles enunciated largely worked out by Gottfried Hermann and G. M. Roth; families of speech and morphology of language then unknown; the school grammars of Greece and Rome, with the categories of modern philosophical systems, defective; truer conception by F. Bernhardi of the nature and relationship of speech; defined language as an allegory of the understanding; sought a connection between the sound and the object; and discussed the relation of language to poetry and science, i. 35-6.

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Germans eagerly pursued the study of Sanskrit soon after its discovery; Schlegel the poet first laid down the great fact that the languages of India, Persia, Greece, Italy, Germany, and Slavonia formed but one family; his work the foundation on which Bopp reared the science of language, i. 48-9.
Gestures and the instinctive play of the features denoting pleasure or pain, and their difference; the latter common to man and the brutes, whilst gestures implying a rational element are peculiar to man, i. 106; often a poor resource and fail to express the meaning intended by children and travellers, *ib.* 106-7.
Giovanni de Balbis, author of a Latin Dictionary, i. 25.
Gipsies penetrated Europe in the twelfth or thirteenth century; Miklosich endeavoured to trace their line of march and the countries passed through by a careful examination of their vocabulary, ii. 76.
Glottology includes a knowledge of the general laws and conditions of language, i. 134-5.
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butes; Vishnu with arms and legs, Merodach as an armed warrior, ii. 297.

Grammar and the method of studying it essentially unsound; the grammars of Greece and Rome largely founded on false theories, imaginary facts, and false rules, ii. 330-1; the noun and oblique cases; Aryan case-endings; the Danish *det er mig* and French *c'est moi;* cases in English derived from the Latin; nature and functions of adjectives, pronouns, and verbs; rules, exceptions, and survivals, *ib.* 331-4; province of literature and historical philology; forms of grammar variable and the causes; recent improvements in the method of Greek, Latin, German, French, and English grammars, *ib.* 334-7; reasons formerly prevalent for teaching Latin and Greek, *ib.* 337-8.

Grammar studied practically by the Romans; Julius Cæsar composed a work entitled "De Analogiâ," and invented the term *ablative;* Cato learnt Greek in his old age in order to teach his son; the study of the problems of grammar made Latin the vehicle of law and oratory, i. 18-19.

Grammar the guide to the relationship of languages; with structure the clue to direct comparative philological research; existence of the Aryan family of speech proved by their grammatical forms; Sir W. Jones, Adelung, and Vater's lists of words mere curiosities, i. 150-1; oldest forms must be noted from books and monuments or existing dialects, *ib.* 151.

Grammarians of India next to those of Assyria and Babylonia in order of time; the rise of Buddhism and the elevation of popular dialects to the rank of literary languages, caused the language of the Veda to become antiquated, and compelled the educated Hindu to study and compare its earlier and later forms, i. 4-5.

Greek contact with Persia stimulated Themistokles to acquire a fluent knowledge of Persian; overthrow of the empire of Cyrus and Darius, impressed the Greeks with contempt for the Asiatic, and infused a belief in the innate superiority of their own language and literature, which proved the bane of classical philology till recent times, i. 8-9.

Greek contempt for the "barbarian" led them to neglect the investigation of the dialects of Asia Minor; Plato noticed the resemblance only to draw a wrong conclusion; and maintained many Greek words had been borrowed by the Phrygians, i. 8.

Greek grammar, technical terms

of, misunderstood, mistranslated, and confounded by the Romans, i. 22.

Greek, or Hellenic, the most important branch of the Aryan family in its vowel system and the perfection of grammatical forms, ii. 101-9.

Greek researches into language divided into three periods, viz. before Sokrates, the Sophists, and Alexandrine grammarians; labours of the Sophists Herakleitus and Demokritus; rise of the so-called science of Etymology; derivation of *lucus a non lucendo;* follies of the pretended science enshrined in the "Etymologicum Magnum," and the "Onomastikon" of Pollux; two of its rules illustrated, i. 7-8.

Greek school grammar by Dionysius Thrax, published at Rome in the time of Pompey, still extant; divided into six parts; spread and added to the absurd etymologizing of the Greeks; Lucius Ælius gave lectures on Latin literature and rhetoric about 100 B.C., and Marcus Terentius Varro wrote five books, "De Linguâ Latinâ," which served as the basis of the "science" of Latin Etymology; Roman vagaries only excelled by Junius and the author of "Ereuna," i. 20-1, and *notes*.

Greek, Roman, and North-American-Indian mode of forming compounds; the last exhibits the primitive condition of speech; the Cheroki, out of six or eight thousand verbal forms, has no single word for the verb separately.; examples of the forms, i. 120.

Greek word *dēmos* from *da*, "to divide," shows private property in Attica originated in the allotment of land as amongst the Slavs at present, i. 161.

Grimm adopted Bopp's method, but devoted himself to the minute and scientific study of one branch of languages; his Deutsche Grammatik ushered in a new epoch in comparative philology, i. 51; studied the ancient through modern and living languages; his method ably applied by Curtius to Greek, who availed himself of the labours of Lobeck, Gottfried Hermann, Passow, Döderlein, and Philipp Buttmann, while nearly a similar advance had been made in Latin by Corssen's predecessors, *ib.* 54; compared the science of language with that of natural history, and, like Goethe, thought mankind had sprung from several separate pairs, *ib.* 70; his view of the development of language, and the origin of the first words from Aryan roots, giving a particular meaning to each separate vowel and consonant, unverified assumptions, *ib.* 70-1; his failure prepared the way for Schleicher, *ib.* 71-2.

Grimm's laws of the interchanges of sound in Aryan speech, the result of wide observation and comparison; English *th* and its relation to *t* in Latin and Greek words, i. 154; his laws affected by others, as noted by Verner in Teutonic; every change in strict accordance with phonetic law and capable of explanation; diversification of Teutonic, Latin, Romanic, and modern English, *ib.* 313; causes of change, *ib.* 314; transition of *g*, *d*, *b*, into *k*, *t*, and *b* in German, and growth of an aspirate; action of one sound upon another, and assimilation explained, *ib.* 315-16; metathesis, and the insertion and omission of vowels; Swarabhakti incompatible with the acute accent, *ib.* 317; prosthesis, or prothesis, and epenthesis illustrated by words from various languages, *ib.* 318-20; different languages have different phonetic tendencies, but Grimm's law never "suspended," or allows exceptions, unless interfered with by others which happen invariably under certain conditions; borrowed words necessarily undergo the same changes; words sometimes altered in form so as to disguise the etymology, as *Shotover* from *Chateau vert;* generalizations and uniformity of Grimm's law, *ib.* 322-3.

Growth and development of language through civilization; the language of Chaucer compared with that at the disposal of a modern writer, i. 100-1; dialects of savages a type of what all languages were originally; the condition of the Tasmanians, New Caledonians, Veddahs of Ceylon, and the Dammaras of South Africa, *ib.* 101-2.

Harar language, apparently Semitic, uses postpositions, and reverses the Semitic order of the words in the genitive, i. 174.

Harris stimulated inquiry and attention to the framework of school grammars by his "Hermes;" and was followed by Horne Tooke's "Diversions of Purley," which revived the old mistake of the Greek Analogists, i. 34-5.

Hebrew, a local dialect of the Canaanite group, together with the Phœnician, Moabite, and neighbouring idioms, ii. 169-70.

Helmholtz detected the exact form of many compound tones by applying the microscope to the vibrations of different musical instruments; confirmed his own and Donders' discovery that the sounds articulated by the human voice have their own special shape, i. 234.

Helvétius followed Anaxagoras and asserted that we became men through the possession of hands, i. 95.

Henotheism and Polytheism but two phases of the same form of religious faith; plurality of deities suggested by the variety of nature overpowers man's yearning for unity; gradually attributes applied to the objects and powers of nature take the place of the latter; the Sun becomes Apollo, and the Storm Arês; deities are multiplied in the mythopœic age when epithets are changed into divinities and demi-gods with a developed mythology; abstract names follow the common process, and temples reared to Terror and Fear, to Love and Reverence; and these are ultimately followed by the higher abstraction of Monotheism, ii. 295-6.

Herakleitus advocated the doctrine of the innate and necessary connection between words and objects, i. 6.

Herder substituted the idea of development for that of uniform sequence; his "Treatise on the Origin of Speech" dissipated the theory that language was a miraculous gift, i. 48.

Herder and Lessing the leaders of a new era of thought and philosophy; the "Ideal of Speech" followed by Jenisch's Berlin Academy prize essay, the "Ideal of a perfect Language;" his four marks of superiority; Herder had previously laid down in his "Ideen" that in each language the understanding and character of its speakers reflects itself, i. 32.

Herodian's views taken up by Ælius, Donatus, and Priscian; their grammatical labours, i. 24.

Heyse, a follower of Humboldt from Hegel's point of view, professed to base his theory on the results of comparative philology; held that language was spiritualized sound, i. 66; his ideas of internal development mystical and contrary to fact; his assertions respecting the soul sheer mythology; evolution of the various forms of speech *not necessary;* language originated from the need of intercommunication, and, as Heyse emphasizes it, was the work of reasonable, thinking beings, *ib.* 67-8.

High and Low German, their formation exactly in accordance with Grimm's law; and the rise of a new language in historical times, i. 307-8.

Hindu grammarians first investigated the language of the Rig-Veda, i. 38-9; laid the foundation of modern scientific philology; their mode of treating words, i. 113; long before the Greeks in their phonological labour, and far more scientific; some of their treatises will compare favourably with those of the present day; their names of the various

sounds and groups of letters from their formation, i. 244-6.
Historians of a later age only able to trace the causes of events of a particular era, ii. 65; the greatest thinkers not free from the prejudices and habits of their times, as Aristotle on Slavery, Bacon and Raleigh on Astrology; apt to over-estimate the culture and civilization of modern Europe; Anglo-Indian contempt of the descendants of Manu and Vikramaditya, *ib.* 66.
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History culled from monumental evidence, from the discoveries of Schliemann and others, not from the Homeric Poems; Mykenæ, Pelops, and the culture of Hellas, ii. 254.
History of the Aryan nations recovered; their migrations and beliefs, culture and civilization better known than the history of the Saxons of the Heptarchy, or the Hebrews of the Davidic era; how preserved and traced by Fick before the first Hymn of the Rig-Veda was composed, the Hellenes reached Greece, or the first Indo-European word had been written down, ii. 326-7.
Holden, Professor, on ease of pronunciation in the adoption of words; and numbers of words acquired by children two years of age in particular instances, ii. 314-15.
Homeric Poems, estimation of by the Greeks; numerous discordant copies gave rise to literary criticism amongst the Alexandrines; a minute investigation and comparison of the older and later forms of the language followed, overshadowed by metaphysics, i. 14-15; the old dispute about the origin of words assumed a new form, *ib.* 15.
Horace's lines on the primitive condition of man and the evolution of speech, i. 13.
Hovelacque on the organ of language and its position; his work on the origin of language exhibits the defects of Schleicher's theory, and contains little more than a catalogue of the various families of speech with their characteristics, i. 76.
Humanists the older, bowed before classical antiquity, and only aimed at writing and speaking Latin correctly; Switheim on government; "to govern" a legacy by the schoolmen, unknown to Priscian, but found in Consentius; outdone

by the orthodox in the "errors" of the Vulgate, i. 26-7.
Human speech ; the problem of its reproduction more successfully approached from the physical and acoustic side than the physiological; instruments most exactly constructed to represent the vocal organs failed to produce anything like human speech ; the mind the creator of speech by giving signification to articulate sounds, i. 335-6.
Human throat a marvellous instrument for the production of manifold sounds; its structure; the most perfect wind instrument of infinite pliability and power of change, and in constant sympathy with the other harmonies of the other organs of speech, i. 236.
Humboldt's (Wilhelm von) great work on the Kawi language published after his death; followed by Steinthal's journal, conducted with the help of Lazarus, has proved a treasury of suggestive thought to linguistic scholars, i. 50-1 ; *ib.* 64 ; confounded the two senses of the word language ; his theory reflects Kant's dualism ; erred in following the *à priori* method rather than the *à posteriori;* but his work of great value to scholars, *ib.* 66; classed Chinese with the inflectional languages of Europe; assumed that all language follows a regular course of development from the isolating stage to the inflectional, *ib.* 370-1.

Idea of a universal grammar due to logic and the unmethodical comparison of ancient and modern languages, and a revival of old Greek theories, i. 33-4.
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Imperfections of speech, lisping and stammering, mainly due to nervous disease, and too high a palate another cause of irregular utterance, i. 252.

Importance of the mouth, or chamber of resonance, in the creation of articulate speech; many sounds owe their origin to it; others formed in the throat are modified in their passage through, the vowels first, then the gutturals and dentals, and lastly the labials undergo change, i. 253.

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school, far superior to the most advanced labours of the Greeks in the same direction; the Nighantavas contain a list of rare Vedic words, and perhaps started the controversy on the origin of nouns between Śâkaṭâyana and Gârgya and their followers; a Sanskrit Dictionary formed and the doctrine of roots clearly enunciated, i. 41-2; labours of Yâska and Pânini; the *Nirukta*, or Etymology of the former, a model of method and conciseness, and the grammar of the latter, the crowning work of Hindu scholarship in the fourth century, *ib.* 42-3.

Keltic language the westernmost of all the Aryan, still spoken in Wales, Brittany, Ireland, and the Scottish Highlands; peculiarities and changes of letters, ii. 83-4; Welsh, Cornish, Breton, and Irish literature; Scotch Gaelic the most corrupt of all the Keltic tongues, *ib.* 87-8.

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Knowledge defined; the result of comparison, i. 132-3.

Krates of Mallos regarded "anomaly" as the leading principle of language; defended the right of usage; author of the first Greek grammar; tried to reform orthography; Appius Claudius Cæcus had written on grammar and Spurius Carvilius had substituted *g* for *z*, so that Krates found a ready audience for his "lectures" upon the study of Greek, B.C. 156; almost all Roman culture borrowed from the Greeks, boys learnt Greek before Latin, and it was generally understood; the first Roman history written in Greek by Fabius Pictor, B.C. 200; speech of Tiberius Gracchus at Rhodes; a native literature sprang up under the influence of Greek teachers, and Latin was trained as the instrument of communication between the polished nations of antiquity and their Roman masters, i. 15-8.

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CHISWICK PRESS:—C. WHITTINGHAM, TOOKS COURT, CHANCERY LANE.

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Digitized with financial assistance from the
Government of Maharashtra
on 18 July, 2018